

GenCore version 5.1.3  
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OM nucleic - nucleic search, using sw model

Run on: October 9, 2002, 14:24:18 ; Search time 357 Seconds  
(without alignments)  
16332.329 Million cell updates/sec

Title: US-09-635-501-1  
 Perfect score: 3396  
 Sequence: 1 gaattcgcgttcacatcctaa.....aaaaaagggcgccgc 3396

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 1736436 seqs, 858457221 residues  
Total number of hits satisfying chosen parameters: 3472872

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Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
                  Maximum Match 10%
                  Listing first 45

```

Database : N\_Geneseq\_032802.\*

1:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1980.DAT.*
2:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1981.DAT.*
3:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1982.DAT.*
4:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1983.DAT.*
5:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1984.DAT.*
6:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1985.DAT.*
7:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA1986.DAT.*
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21:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA2000.DAT.*
22:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA2001A.DAT.*
23:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA2001B.DAT.*
24:	/SIDSL/cgcdata/hold-geneseq/geneseqn-emb1/NA2002.DAT.*

pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result No.	%			Length	DB	ID	Description
	Score	Match	Query				
1	3396	100.0	3396	22	AAD02758	Human angiotensin	
2	3394.4	100.0	3396	21	AAAI2764	cDNA encoding a hu	
3	3309.8	97.5	3334	22	ACB84365	Human Zace2 protei	
4	2855.6	84.1	3732	22	AAS21279	Human CDNA sequenc	
5	2416.4	71.2	2418	21	AAZ59465	Human MPROT15 codi	
6	2297.4	67.7	2920	22	AAS14880	Human CDNA encodin	
7	2275	67.0	2911	22	AAS14890	Human CDNA encodin	
8	2065.2	60.8	3474	22	AAS42515	Human CDNA encodin	
9	1922.2	56.6	2262	21	AAZ59465	Human MPROT15 codi	

10	1888.6	55.6	2638	22	AAC843568	Mouse Zace2-5 prot
11	1885.4	55.5	2638	22	AAC843370	Mouse Zace2-10 pro
12	1782.4	52.5	2415	22	AAC843367	Human Zace2 protei
13	1535.2	45.2	2415	22	AAC843369	Mouse Zace2-5 prot
c 14	946	27.9	946	22	AAL06017	Human reproductive
c 15	946	27.9	946	22	AAL06018	Human reproductive
c 16	384	11.3	395	22	AAL01868	Human reproductive
17	324	9.5	3942	22	AAK35851	Kat angiotensin co
18	321.2	9.5	4020	21	AAK38330	Human angiotensin-
19	332.6	9.5	4024	11	AAQ04027	Human angiotensin-
20	321.6	9.5	4024	20	AAK35850	Human angiotensin
21	320.4	9.4	3939	22	AAS06085	Angiotensin conver
22	320.4	9.4	4563	22	AAS06057	Angiotensin conver
23	338.4	9.4	4020	19	AAH41320	Human angiotensin
24	296.6	8.7	5005	22	AHH57430	Human intestine ce
25	291	8.6	467	19	AAV09277	Nucleotide sequenc
26	285.8	8.4	2477	12	AAQ10328	Encodes human test
27	281.6	8.3	313	20	AAV86528	EST clone AU47. H
28	250.4	7.4	2082	21	APAA6692	Degenerate sequenc
29	250.4	7.4	2082	22	AA514369	Human zinc metallo
30	240.8	7.1	280	21	AAZ43074	Human 5' EST isola
c 31	217.8	6.4	456	22	ABA53751	Human foetal liver
c 32	217.8	6.4	456	22	AAK05620	Human brain expres
c 33	217.8	6.4	456	22	AAK31325	Human bone marrow
c 34	217.8	6.4	456	22	AAJ37129	Probe #5815 used t
35	201.8	5.9	2089	23	ABLL4379	Drosophila melanog
36	197.8	5.8	2074	16	AQ082948	Tick carboxypeptid
37	186.4	5.5	2450	23	ABLI16697	Drosophila melanog
38	186.4	5.5	5060	23	ABLI16696	Drosophila melanog
c 39	177	5.2	177	22	ABA70193	Human foetal liver
c 40	177	5.2	177	22	AAK18416	Human brain expres
c 41	177	5.2	177	22	AAK44317	Human bone marrow
c 42	177	5.2	177	22	AAI50319	Probe #19005 used
c 43	127	3.7	847	20	AAK30083	Human secreted pro
c 44	127	3.7	848	20	AZ40770	Secreted protein e
c 45	127	3.7	848	20	AAK88191	Human secreted pro

## ALIGNMENTS

RESULT 1  
AAD02758  
ID AAD02758 standard; CDNA: 3396 BP.

AA AAD02758:  
AC

31-MAY-2001 (first entry)

XX  
DE Human angiotensin converting enzyme-2 (ACE-2) cDNA.

Human; angiotensin converting enzyme-2; ACE-2; peptidyl dipeptidase A;  
 screening; therapy; hypertension; congestive heart failure; CHF;  
 inflammation; pain; ss-

XX  
OS Homo sapiens.

XX	Key	Location/Qualifiers
FH		

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FI      CD3
ET      02..2433
/*tag= a

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FT  
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FT

/product-  
(ACE-2)"

human anti-toxin converting enzyme

FT  
/ECNUMBER= 3.4.15.1  
/note= "This region is referred as SEQ.ID.NO.3 and is

FT	sig_peptide	82..135	spectrally claimed in train 20
FT	sig_peptide	82..135	

FT	mat_peptide	136..2496
FT	mat_peptide	136..2496

	/product=	"Human mature angiotensin converting enzyme-2"
I =	/product-	

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XX PD 27-FEB-2001.  
XX PF 11-DEC-1997; 97US-0989299.  
XX PR 11-DEC-1997; 97US-0989299.  
XX PA (MILL-) MILLENNIUM PHARM INC.  
XX PI Acton SL, Robison KE;  
XX DR WPI; 2001-210604/21.  
XX DR P-PSDB; AAY72667.  
XX PT Novel genes encoding angiotensin converting enzyme-2 useful as  
XX PT antisense or antigenic agents for therapeutics, diagnostics and  
XX PT screening assays -  
XX PS Claim 1; Fig 1; 76pp; English.  
XX SS The present sequence is human angiotensin converting enzyme-2 (ACE-2)  
CC cDNA. ACE is also referred as peptidyl dipeptidase A. Nucleic acid  
CC sequence encoding ACE-2 is useful as antisense or antigenic agents for  
CC sequence specific modulation of gene expression or in the analysis of  
CC single base-pair mutations in the gene. Nucleic acid sequence encoding  
CC ACE-2 is useful in therapeutics, diagnostics and in screening assays.  
CC ACE-2 antagonist is used to treat hypertension or congestive heart  
CC failure (CHF). ACE agonist is used to reduce the inflammation and pain  
CC resulting from an insect sting or bite, which was accompanied by an  
CC injection of bradykinin. Anti-ACE-2 antibodies are used to monitor ACE-2  
CC protein levels for determining the disease or condition associated with  
CC an aberrant protein level.  
XX SQ Sequence 3396 BP; 1034 A; 659 C; 772 G; 931 T; 0 other;  
  
Query Match 100.0%; Score 3396; DB 22; Length 3396;  
Best Local Similarity 100.0%; Pred No. 0;  
Matches 3396; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 1 GAATTCGGCTTCCATCCTAATAGACTCATAATAGGGCTCGAGCGCGCCCGGGGCAGG 60  
DB 1 GAATTCGGCTTCCATCCTAATAGACTCATAATAGGGCTCGAGCGCGCCCGGGGCAGG 60  
  
QY 61 TATCTTGGCTCAGGGGAGGATGCAAGCTCTTCTGGCTCCTCTCAGCGCTTGTGCT 120  
DB 61 TATCTTGGCTCAGGGGAGGATGCAAGCTCTTCTGGCTCCTCTCAGCGCTTGTGCT 120  
  
QY 121 GTAACCTGCTCAGTCCAGCCATTGAGGACAGGCGCAAGACATTTTGGACAAGTTTAAAC 180  
DB 121 GTAACCTGCTCAGTCCAGCCATTGAGGACAGGCGCAAGACATTTTGGACAAGTTTAAAC 180  
  
QY 181 CACGAAGCCGAAGCCGTCTTATCAAGTTCACCTGCTTCTTGGAAATTAACACCAAT 240  
DB 181 CACGAAGCCGAAGCCGTCTTATCAAGTTCACCTGCTTCTTGGAAATTAACACCAAT 240  
  
QY 241 ATTACTGAAGAGATGTCCAAAACATGAATAATGCTGGGCAAAATGGTCTGCCCTTTTA 300  
DB 241 ATTACTGAAGAGATGTCCAAAACATGAATAATGCTGGGCAAAATGGTCTGCCCTTTTA 300  
  
QY 301 AAGGAACAGTCCACACTTGGCCAAATGTATCCACTACAGAATTCAGATCTCAGTC 360  
DB 301 AAGGAACAGTCCACACTTGGCCAAATGTATCCACTACAGAATTCAGATCTCAGTC 360  
  
QY 361 AAGCTTCAGCTCAGGCTCTTCAGCAAAATGGGCTCTTCAGTGTGTCAGAAGCAAGAGC 420  
DB 361 AAGCTTCAGCTCAGGCTCTTCAGCAAAATGGGCTCTTCAGTGTGTCAGAAGCAAGAGC 420  
  
QY 421 AAGCGTTGAACACAATCTTAATACAAATGAGGACCAATCTCAGTACTGGAAAGTTTGT 480  
DB 421 AAGCGTTGAACACAATCTTAATACAAATGAGGACCAATCTCAGTACTGGAAAGTTTGT 480  
  
QY 481 AACCCAGATATCCACAAGATGCTTATTTGTAACACAGGTTTGAATGAAATTAATGSCA 540  
DB 481 AACCCAGATATCCACAAGATGCTTATTTGTAACACAGGTTTGAATGAAATTAATGSCA 540

DB 481 AACCCAGATATCCACAAGATGCTTATTTGTAACACAGGTTTGAATGAAATTAATGSCA 540  
QY 541 AACAGTTTAGACTACAAATGAGAGGCTCTGGGCTTGGAAAGCTGGAGATCTGAGTFCGGC 600  
DB 541 AACAGTTTAGACTACAAATGAGAGGCTCTGGGCTTGGAAAGCTGGAGATCTGAGTFCGGC 600  
QY 601 AAGCAGCTGAGGCAATATATGAAGATGCTGCTCTTCAAAATCAGATGCAAGAGCA 660  
DB 601 AAGCAGCTGAGGCAATATATGAAGATGCTGCTCTTCAAAATCAGATGCAAGAGCA 660  
QY 661 AATCATTATGAGGACTATGGGCAATTTGGAGAGGAGACTATGAAGTAAATGGGTAGAT 720  
DB 661 AATCATTATGAGGACTATGGGCAATTTGGAGAGGAGACTATGAAGTAAATGGGTAGAT 720  
QY 721 GGCTATGACTACAGCGCGGCCAGTTGATTGAAGATGTGGAACATACCTTTCAAGAGATT 780  
DB 721 GGCTATGACTACAGCGCGGCCAGTTGATTGAAGATGTGGAACATACCTTTCAAGAGATT 780  
QY 781 AAACCAATTATGAACATCTTCAATGCCTATGAGGCGCAAGTTGATGAATGCCTATCCT 840  
DB 781 AAACCAATTATGAACATCTTCAATGCCTATGAGGCGCAAGTTGATGAATGCCTATCCT 840  
QY 841 TCCTATATCAGTCCAATGATGCCCTCCCTGCTCATTTGCTTGGTATATGTTGGGTAGA 900  
DB 841 TCCTATATCAGTCCAATGATGCCCTCCCTGCTCATTTGCTTGGTATATGTTGGGTAGA 900  
QY 901 TTTTGGACAAATCTGTACTCTTTGACAGTTCCTTTGGACAGAAACCAACATAGATGTT 960  
DB 901 TTTTGGACAAATCTGTACTCTTTGACAGTTCCTTTGGACAGAAACCAACATAGATGTT 960  
QY 961 ACTGATGCAATGTGGACAGGCTGGGATGACAGAGATATTTCAAGGAGGCCGAGAG 1020  
DB 961 ACTGATGCAATGTGGACAGGCTGGGATGACAGAGATATTTCAAGGAGGCCGAGAG 1020  
QY 1021 TTCTTTGATCTGTTGGTCTTCTTAATATGACTCAAGGATTTCTGGAAATTTCCATGCTA 1080  
DB 1021 TTCTTTGATCTGTTGGTCTTCTTAATATGACTCAAGGATTTCTGGAAATTTCCATGCTA 1080  
QY 1081 ACGGACCCAGGAAATGTTGAAAGCAGTCTGCCATCCACAGCTTTGGACCTGGGGAG 1140  
DB 1081 ACGGACCCAGGAAATGTTGAAAGCAGTCTGCCATCCACAGCTTTGGACCTGGGGAG 1140  
QY 1141 GGGGACTTCAGGATCCTTATGTSCAAAGGTGACAAATGGAGGACTTCTGACAGCTCAT 1200  
DB 1141 GGGGACTTCAGGATCCTTATGTSCAAAGGTGACAAATGGAGGACTTCTGACAGCTCAT 1200  
QY 1201 CATGAGATGGGCAATATCCAGATGATATGGCATATGCTGACACACCTTTTCTGCTAGA 1260  
DB 1201 CATGAGATGGGCAATATCCAGATGATATGGCATATGCTGACACACCTTTTCTGCTAGA 1260  
QY 1261 AATGGAGCTAATCAAGGATTTCCATGAAGCTGTGGGAAATCATGTCATTTCTGCAGCC 1320  
DB 1261 AATGGAGCTAATCAAGGATTTCCATGAAGCTGTGGGAAATCATGTCATTTCTGCAGCC 1320  
QY 1321 ACACCTAAGCATTTAAATCCATTTGCTTCTGTCACCCGATTTTCAAGAGACAAATGAA 1380  
DB 1321 ACACCTAAGCATTTAAATCCATTTGCTTCTGTCACCCGATTTTCAAGAGACAAATGAA 1380  
QY 1381 ACAGAAATAACTTCTGCTCAACAGCAGCTACAGATTTTGGGACTCTGCGCATTTACT 1440  
DB 1381 ACAGAAATAACTTCTGCTCAACAGCAGCTACAGATTTTGGGACTCTGCGCATTTACT 1440  
QY 1441 TACATGTTAGAGAAGTGGAGTGGATGGTCTTTAAAGGGGAAATTTCCCAAGACCAAGTGG 1500  
DB 1441 TACATGTTAGAGAAGTGGAGTGGATGGTCTTTAAAGGGGAAATTTCCCAAGACCAAGTGG 1500  
QY 1501 ATGAAAAGTGGTGGAGATGAAGCAGAGATAGTTGGGGTGGTGAACCTGTGCCCAT 1560  
DB 1501 ATGAAAAGTGGTGGAGATGAAGCAGAGATAGTTGGGGTGGTGAACCTGTGCCCAT 1560  
QY 1561 GATGAAACATACGTGTGACCCCGCATCTCTGTTCCATGTTTCTTAATGATTACTCATTCATT 1620  
DB 1561 GATGAAACATACGTGTGACCCCGCATCTCTGTTCCATGTTTCTTAATGATTACTCATTCATT 1620

QY 1621 CGATATTACAAAGACCCCTTTACCAATCCAGTTTCAAGAGCACCTTTGTCAAGCAGCT 1680  
DB 1621 CGATATTACAAAGACCCCTTTACCAATCCAGTTTCAAGAGCACCTTTGTCAAGCAGCT 1680  
QY 1681 AAACATGAAGGCCCTCTGCACAAATGTGACATCTCAAACTCTACAGAGCTGGACAGAAA 1740  
DB 1681 AAACATGAAGGCCCTCTGCACAAATGTGACATCTCAAACTCTACAGAGCTGGACAGAAA 1740  
QY 1741 CTGTTCAATATGCTGAGGCTTGGAAATCAGAACCTCGGACCCCTAGCATTGGAAAAATGTT 1800  
DB 1741 CTGTTCAATATGCTGAGGCTTGGAAATCAGAACCTCGGACCCCTAGCATTGGAAAAATGTT 1800  
QY 1801 GTAGGAGCAAGAACATGAATGTAGAGCCACTGTCTCAACTACTTTGAGCCCTTTATTACC 1860  
DB 1801 GTAGGAGCAAGAACATGAATGTAGAGCCACTGTCTCAACTACTTTGAGCCCTTTATTACC 1860  
QY 1861 TGGCTGAAGAGCCAGAACAGAAATCTTTTGTGGATGGATACCGACTGGAGTCCATAT 1920  
DB 1861 TGGCTGAAGAGCCAGAACAGAAATCTTTTGTGGATGGATACCGACTGGAGTCCATAT 1920  
QY 1921 GCAGACCAAGCATCAAAAGTGAAGTAAAGCCCTAAATCAGCTCTTGGAGATAAAGCATAT 1980  
DB 1921 GCAGACCAAGCATCAAAAGTGAAGTAAAGCCCTAAATCAGCTCTTGGAGATAAAGCATAT 1980  
QY 1981 GAATGAAGCAGCAATGAATGTACCTGTCCGATCATCTGTTCATATGCTATGAGCAG 2040  
DB 1981 GAATGAAGCAGCAATGAATGTACCTGTCCGATCATCTGTTCATATGCTATGAGCAG 2040  
QY 2041 TACTTTTTAAAAAGTAAAAATCAGATGATCTTTTGGGAGGAGGATGTCCGAGTGGCT 2100  
DB 2041 TACTTTTTAAAAAGTAAAAATCAGATGATCTTTTGGGAGGAGGATGTCCGAGTGGCT 2100  
QY 2101 AATTTGAACCAAGAAATCTCTTTAATTTCTTGTCTCACTGCACCTAAATAATGTCTGTAT 2160  
DB 2101 AATTTGAACCAAGAAATCTCTTTAATTTCTTGTCTCACTGCACCTAAATAATGTCTGTAT 2160  
QY 2161 ATCATTTCCTAGAACTCAAGTTCAGAAAGGCCATCAGGATGTCCCGAGGCCGTATCAATGAT 2220  
DB 2161 ATCATTTCCTAGAACTCAAGTTCAGAAAGGCCATCAGGATGTCCCGAGGCCGTATCAATGAT 2220  
QY 2221 GCTTTCCGCTCTGAATGACAAAGCCCTAGAGTTCTTGGGATACAGCCCAACACTTTGGACCT 2280  
DB 2221 GCTTTCCGCTCTGAATGACAAAGCCCTAGAGTTCTTGGGATACAGCCCAACACTTTGGACCT 2280  
QY 2281 CCTAACCGCCCTCTTTCCATATGGCTGATTTTGGAGTTGTGATGGAGTGATA 2340  
DB 2281 CCTAACCGCCCTCTTTCCATATGGCTGATTTTGGAGTTGTGATGGAGTGATA 2340  
QY 2341 GTGGTTGGCATGTCTATCTGATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAA 2400  
DB 2341 GTGGTTGGCATGTCTATCTGATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAA 2400  
QY 2401 GCAAGAGTGGAGAAATCTTATGCTCCATCGATATTAGCAAGAGAGAAATAATCCA 2460  
DB 2401 GCAAGAGTGGAGAAATCTTATGCTCCATCGATATTAGCAAGAGAGAAATAATCCA 2460  
QY 2461 GGATTCACAAACACTGATGATGTTCAGACCTCTTTTAGAAAAATCTATGTTTTCTCT 2520  
DB 2461 GGATTCACAAACACTGATGATGTTCAGACCTCTTTTAGAAAAATCTATGTTTTCTCTCT 2520  
QY 2521 TGAGGTGATTTGCTGATGTAATGTAAATTCATGTTATGATGATGATGATGATGATGAT 2580  
DB 2521 TGAGGTGATTTGCTGATGTAATGTAAATTCATGTTATGATGATGATGATGATGATGAT 2580  
QY 2581 AGATATCATTAATGTCAAACTATGACTCTCTTCAGAAAAATAATTCCTCAAGAGCAAC 2640  
DB 2581 AGATATCATTAATGTCAAACTATGACTCTCTTCAGAAAAATAATTCCTCAAGAGCAAC 2640  
QY 2641 ATGGCCAGGAGAGAGCATCTTCATTTGACATGCTTTTCAGTATTTATTTCTGCTCTGGA 2700  
DB 2641 ATGGCCAGGAGAGAGCATCTTCATTTGACATGCTTTTCAGTATTTATTTCTGCTCTGGA 2700

QY 2701 TTTGACTTCTGTCTCTTTCTTAATAAGGATTTTGTATTAGAGTATATTAGGAAAAGTGT 2760  
DB 2701 TTTGACTTCTGTCTCTTTCTTAATAAGGATTTTGTATTAGAGTATATTAGGAAAAGTGT 2760  
QY 2761 GTATTGGTCTCACAGGCTGTTCAGGGATAATCTAAATGTAATGTCTGTTGAATTTCTG 2820  
DB 2761 GTATTGGTCTCACAGGCTGTTCAGGGATAATCTAAATGTAATGTCTGTTGAATTTCTG 2820  
QY 2821 AAGTTGAAAACAAAGGATATATCATTTGGAGCAAGTGTGATGGAATATGGAATG 2880  
DB 2821 AAGTTGAAAACAAAGGATATATCATTTGGAGCAAGTGTGATGGAATATGGAATG 2880  
QY 2881 GATCAGCTTGTAGGACAGTGCCTGGAACTGGTGTAGCTGCAAGGATTTGAAATGGGATG 2940  
DB 2881 GATCAGCTTGTAGGACAGTGCCTGGAACTGGTGTAGCTGCAAGGATTTGAAATGGGATG 2940  
QY 2941 CATTAGCTCACCTTTTCAATTAATCCATTTGTCAAGGATGACATGCTTTCTTCACAGTAAC 3000  
DB 2941 CATTAGCTCACCTTTTCAATTAATCCATTTGTCAAGGATGACATGCTTTCTTCACAGTAAC 3000  
QY 3001 AGTTCAAGTACTATGGTGTATTTGCCCTACAGTATGTTTGGAAATCGATCATGCTTTCTTCA 3060  
DB 3001 AGTTCAAGTACTATGGTGTATTTGCCCTACAGTATGTTTGGAAATCGATCATGCTTTCTTCA 3060  
QY 3061 AGTTGACAGCTCTAAAGAGAGAGAAATCCAGGAAACAGGTAGAGACATTTGCTTTTTCAC 3120  
DB 3061 AGTTGACAGCTCTAAAGAGAGAGAAATCCAGGAAACAGGTAGAGACATTTGCTTTTTCAC 3120  
QY 3121 TTCCAAGTGTGTATCAACATCTCCCTGACAAACAACTAGAGCCAGGGGCTTCGGT 3180  
DB 3121 TTCCAAGTGTGTATCAACATCTCCCTGACAAACAACTAGAGCCAGGGGCTTCGGT 3180  
QY 3181 GAATCCAGAGCATCCCTGATAGAACTCAATTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT 3240  
DB 3181 GAATCCAGAGCATCCCTGATAGAACTCAATTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT 3240  
QY 3241 TGGAAATTCACAACTGTATGTTTCCACCTCTGAAAGTGGTACCCAGTCTCTTAAATCTTTTG 3300  
DB 3241 TGGAAATTCACAACTGTATGTTTCCACCTCTGAAAGTGGTACCCAGTCTCTTAAATCTTTTG 3300  
QY 3301 TATTTGCTCACAGTGTTCAGCAGTGTGAGCAGTGTGAGCAGTGTGAGCAGTGTGAGCAGT 3360  
DB 3301 TATTTGCTCACAGTGTTCAGCAGTGTGAGCAGTGTGAGCAGTGTGAGCAGTGTGAGCAGT 3360  
QY 3361 TTTTACACACTCAAAAAAAGGGGCGCCGC 3396  
DB 3361 TTTTACACACTCAAAAAAAGGGGCGCCGC 3396

RESULT 2  
AAAL2764  
ID AAAL2764 standard; cdna; 3396 BP.  
XX  
AC AAAL2764;  
XX  
DT 25-JUL-2000 (first entry)  
XX  
DE cDNA encoding a human angiotensin converting enzyme-2 (ACE-2).  
XX  
KW Human; angiotensin converting enzyme-2; ACE-2; angiotensin I; Ang.(1-9);  
KW blood pressure; hypertension; congestive heart failure; atherosclerosis;  
KW chronic heart failure; acute heart failure; myocardial infarction;  
KW renal failure; ss.  
XX  
OS Homo sapiens.  
XX  
FH key Location/Qualifiers  
FT CDS 82..2499  
FT    /\*tag= a  
FT    /product= "angiotensin converting enzyme-2"  
FT    82..135  
FT    /\*tag= b  
XX

PN W0200018899-A2.  
XX  
PD 06-APR-2000.  
XX 29-SEP-1999; 99WO-US22976.  
PF XX 30-SEP-1998; 98US-0163648.  
PR XX (MILL-) MILLENNIUM PHARM INC.  
XX  
PA  
XX  
XX  
PI Acton LS, Robison KE, Hsieh FY;  
XX  
XX WPI: 2000-293140/25.  
DR P-PSDB; RAY84562.  
DR  
XX  
XX Isolated nucleic acid encoding angiotensin converting enzyme-2 (ACE-2)  
PT polypeptide useful for detecting an ACE-2 therapeutic for treating  
PT hypertension, congestive heart failure, myocardial infarction,  
PT atherosclerosis and renal failure -  
XX  
XX Claim 1; Fig 1; 138pp; English.  
PS  
XX  
CC The present sequence encodes a human angiotensin converting enzyme-2  
CC (ACE-2). ACE-2 is expressed predominantly in kidneys and testis. The  
CC sequence of the full length ACE-2 cDNA was determined from a clone  
CC obtained from a cDNA library prepared from mRNA of a human heart of  
CC a subject who had congestive heart failure. ACE-2 has significant  
CC sequence homologies with ACE enzymes, and has also been shown to  
CC hydrolyse angiotensin I into Ang.(1-9). The ACE-2 therapeutics are  
CC used to treat blood pressure related diseases and conditions, such as  
CC hypertension, congestive heart failure, chronic heart failure, acute  
CC heart failure, myocardial infarction, atherosclerosis and renal  
CC failure.  
XX  
SQ Sequence 3396 BP; 1034 A; 560 C; 771 G; 931 T; 0 other;

Query Match 100.0%; Score 3394.4; DB 21; Length 3396;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 3395; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 GAATTCGGCTTCCATCCTAATACGACTCATTATAGGCTCGAGCGCGCCGGGCGAGG 60  
DB 1 GAATTCGGCTTCCATCCTAATACGACTCATTATAGGCTCGAGCGCGCCGGGCGAGG 60  
QY 61 TATCTTGGCTCAGGGGACGATGTCAGCTCTTCTGGCTCTTCTCAGCCTTGTGCT 120  
DB 61 TATCTTGGCTCAGGGGACGATGTCAGCTCTTCTGGCTCTTCTCAGCCTTGTGCT 120  
QY 121 GTAACCTGCTCAGTCCACCATTGAGGAACAGGCCAGACATTTTGGACAAGTTTAA 180  
DB 121 GTAACCTGCTCAGTCCACCATTGAGGAACAGGCCAGACATTTTGGACAAGTTTAA 180  
QY 181 CAGGAAGCCGAAGACCTGTCTATCAAGTTCACCTTGTCTTGAATTTATACACCAAT 240  
DB 181 CAGGAAGCCGAAGACCTGTCTATCAAGTTCACCTTGTCTTGAATTTATACACCAAT 240  
QY 241 ATTACTGAAGAGAATGTCACAAACATGAATAATGCTGGGCAAAATGGTCTGCTTTTA 300  
DB 241 ATTACTGAAGAGAATGTCACAAACATGAATAATGCTGGGCAAAATGGTCTGCTTTTA 300  
QY 301 AAGGAACAGTCCACATTCGCCAAATGTATCCACTACAGAATAATTCAGATCTCAGTC 360  
DB 301 AAGGAACAGTCCACATTCGCCAAATGTATCCACTACAGAATAATTCAGATCTCAGTC 360  
QY 361 AAGCTTCAGCTCAGGCTCTTCAGCAAAATGGTCTTTCAGTCTGTCAGAAGCAAGAGC 420  
DB 361 AAGCTTCAGCTCAGGCTCTTCAGCAAAATGGTCTTTCAGTCTGTCAGAAGCAAGAGC 420  
QY 421 AAACGGTTGAACACAATTTCTAAATACAAATGAGCACCATCTACAGTACTGGAAAGTTGT 480  
DB 421 AAACGGTTGAACACAATTTCTAAATACAAATGAGCACCATCTACAGTACTGGAAAGTTGT 480  
QY 481 AACCCAGATANTCCACAAGATGCTTATTTACTTGAACAGGTTTGAATGAATATGGCA 540

DB 481 AACCCAGATANTCCACAAGATGCTTATTTACTTGAACACAGGTTTGAATGAATATGGCA 540  
QY 541 AACAGTTTACACTACAAATGAGAGGCTCTGGGCTTGGGAAAGCTGGAGATCTCAGGTCCGC 600  
DB 541 AACAGTTTACACTACAAATGAGAGGCTCTGGGCTTGGGAAAGCTGGAGATCTCAGGTCCGC 600  
QY 601 AAGCAGCTGAGGCCATATATGAAGAGTATGTGCTTGAANAATGAGATGCAAGAGCA 660  
DB 601 AAGCAGCTGAGGCCATATATGAAGAGTATGTGCTTGAANAATGAGATGCAAGAGCA 660  
QY 661 AATCATATGAGGACTATGGGNTATTGAGAGGAGACTATGAAGTAATGGGTAGAT 720  
DB 661 AATCATATGAGGACTATGGGNTATTGAGAGGAGACTATGAAGTAATGGGTAGAT 720  
QY 721 GGCTATGACTACAGCGCGGCCAGTTGATTGAAGATGTGGAACATACCTTTTGAAGAGATT 780  
DB 721 GGCTATGACTACAGCGCGGCCAGTTGATTGAAGATGTGGAACATACCTTTTGAAGAGATT 780  
QY 781 AAACCATATATGAACATCTTCATGCTATGAGGCGCAAGTTGATGAATGCTTATCCT 840  
DB 781 AAACCATATATGAACATCTTCATGCTATGAGGCGCAAGTTGATGAATGCTTATCCT 840  
QY 841 TCCTATATCAGTCAATTTGATGCTCCCTGCTCATTGCTTGGTGATATGTGGGTAGA 900  
DB 841 TCCTATATCAGTCAATTTGATGCTCCCTGCTCATTGCTTGGTGATATGTGGGTAGA 900  
QY 901 TTTTGGCAAAATCTGTACTCTTTGACAGTTCCTTTGGACAGAAACCAACATAGATGTT 960  
DB 901 TTTTGGCAAAATCTGTACTCTTTGACAGTTCCTTTGGACAGAAACCAACATAGATGTT 960  
QY 961 ACTGATCAATGTGGACAGGCTGGGATGCACAGAGATATTCAGGAGGCGCGAGAAG 1020  
DB 961 ACTGATCAATGTGGACAGGCTGGGATGCACAGAGATATTCAGGAGGCGCGAGAAG 1020  
QY 1021 TTCTTTCTATCTGTTGGTCTTCTTAATATGACTCAAGGATTCGGGAAATTCATGCTA 1080  
DB 1021 TTCTTTCTATCTGTTGGTCTTCTTAATATGACTCAAGGATTCGGGAAATTCATGCTA 1080  
QY 1081 ACGGACCCAGGAAATGTTGAGAAAGCAGTCTGCCATCCACAGCTTGGGACCTGGGGAAG 1140  
DB 1081 ACGGACCCAGGAAATGTTGAGAAAGCAGTCTGCCATCCACAGCTTGGGACCTGGGGAAG 1140  
QY 1141 GGCAGCTTCAGGATCTTATGTGCACAAAGTGACAAATGACGACTTCCTGACAGCTCAT 1200  
DB 1141 GGCAGCTTCAGGATCTTATGTGCACAAAGTGACAAATGACGACTTCCTGACAGCTCAT 1200  
QY 1201 CATGAGATGGGCAATCCAGTATGATATGATATGATATGCTGCACAACTTTTCTGCTAAGA 1260  
DB 1201 CATGAGATGGGCAATCCAGTATGATATGATATGATATGCTGCACAACTTTTCTGCTAAGA 1260  
QY 1261 AATGGAGCTAATGAAGATTCATGAGGCTGGGGAATCATGTCACCTTCTGCGAGCC 1320  
DB 1261 AATGGAGCTAATGAAGATTCATGAGGCTGGGGAATCATGTCACCTTCTGCGAGCC 1320  
QY 1321 ACACCTAGCATTTAAATCCATTTGCTGTCACCCGATTTTCAAGAAGCAATGAA 1380  
DB 1321 ACACCTAGCATTTAAATCCATTTGCTGTCACCCGATTTTCAAGAAGCAATGAA 1380  
QY 1381 ACAGAAATTAACCTTCTGCTCAAAACAGCACTACAGTATGTTGGGACTCTGCCATTACT 1440  
DB 1381 ACAGAAATTAACCTTCTGCTCAAAACAGCACTACAGTATGTTGGGACTCTGCCATTACT 1440  
QY 1441 TACATGTTAGAGAGTGGAGTGGATGGTCTTTAAAGGGGAAATTCCTCAAGACAGCAGTG 1500  
DB 1441 TACATGTTAGAGAGTGGAGTGGATGGTCTTTAAAGGGGAAATTCCTCAAGACAGCAGTG 1500  
QY 1501 ATGAAAAGTGGTGGAGATGAAGCGAGAGATAGTTGGGGTGGTGAACCTGTGCCCAT 1560  
DB 1501 ATGAAAAGTGGTGGAGATGAAGCGAGAGATAGTTGGGGTGGTGAACCTGTGCCCAT 1560  
QY 1561 GATGAACATACTGTGACCCCGCATCTCTGTTCCATGTTTCTAATGATTACTCATTATT 1620

Db	1561	GATGAAACATACTGTGACCCCGCATCTCTGTTCATGTTTCTTAATGATTA	1620
QY	1621	CGATATTACACAAGGACCCCTTTACAAATCCAGTTTCAAGAAGCACTTTGTCAAGCAGCT	1680
Db	1621	CGATATTACACAAGGACCCCTTTACAAATCCAGTTTCAAGAAGCACTTTGTCAAGCAGCT	1680
QY	1681	AAACATGAAGGCCCTCTGCACAAATGTGCATCTCAAACTCTACAGAAGCTGCACAGAAA	1740
Db	1681	AAACATGAAGGCCCTCTGCACAAATGTGCATCTCAAACTCTACAGAAGCTGCACAGAAA	1740
QY	1741	CTGTTCAAATATGCTCAGGCTTGGAAAAATCAGAACCCCTGGACCCCTAGCATTTGGAAAAATGTT	1800
Db	1741	CTGTTCAAATATGCTCAGGCTTGGAAAAATCAGAACCCCTGGACCCCTAGCATTTGGAAAAATGTT	1800
QY	1801	GTAGGACAAAGAACATGAATGTGAAGCCATGCTCAACTACTCTTTGAGCCCTTATTTACC	1860
Db	1801	GTAGGACAAAGAACATGAATGTGAAGCCATGCTCAACTACTCTTTGAGCCCTTATTTACC	1860
QY	1861	TGGCTGAAAGACCAAGAAATTTCTTTCTGGATGGAGTACCGACTCGAGTCCCATAT	1920
Db	1861	TGGCTGAAAGACCAAGAAATTTCTTTCTGGATGGAGTACCGACTCGAGTCCCATAT	1920
QY	1921	GCAGACCAAGCATCAAACTGAGGATAAGCCTAAATACAGCTCTTCGAGATAAAGCATAT	1980
Db	1921	GCAGACCAAGCATCAAACTGAGGATAAGCCTAAATACAGCTCTTCGAGATAAAGCATAT	1980
QY	1981	GAATGAACGCAATGAATGTACCTGTTCCGATCCTCTGTCGATATGCTATGAGCGAG	2040
Db	1981	GAATGAACGCAATGAATGTACCTGTTCCGATCCTCTGTCGATATGCTATGAGCGAG	2040
QY	2041	TACTTTTTAAAAAGTAAAAATCAGATGATCTCTTTTGGGAGGAGGATGTCCGAGTGGCT	2100
Db	2041	TACTTTTTAAAAAGTAAAAATCAGATGATCTCTTTTGGGAGGAGGATGTCCGAGTGGCT	2100
QY	2101	AAATTTGAAACCAAGATCTCCTTTAAATTTCTTTGTCACTGCACCTAAAAATGTGCTCTGAT	2160
Db	2101	AAATTTGAAACCAAGATCTCCTTTAAATTTCTTTGTCACTGCACCTAAAAATGTGCTCTGAT	2160
QY	2161	ATCATTTCTTAGAATCAAGTTGAAAGGCCATCAGGATGTCCCGAGGAGCCGTATCAATGAT	2220
Db	2161	ATCATTTCTTAGAATCAAGTTGAAAGGCCATCAGGATGTCCCGAGGAGCCGTATCAATGAT	2220
QY	2221	GCATTCCTGCTGAATGACAAACGCCCTAGAGTTTCTGGGGATACAGCAACACTTGGACCT	2280
Db	2221	GCATTCCTGCTGAATGACAAACGCCCTAGAGTTTCTGGGGATACAGCAACACTTGGACCT	2280
QY	2281	CCTAACCCAGCCCTCTTTCCATATGGCTGATGTTGTTTGGAGTTGTGATGGGAGTGATA	2340
Db	2281	CCTAACCCAGCCCTCTTTCCATATGGCTGATGTTGTTTGGAGTTGTGATGGGAGTGATA	2340
QY	2341	GTGGTTGGCATGTCACTCTGATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAAA	2400
Db	2341	GTGGTTGGCATGTCACTCTGATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAAA	2400
QY	2401	GCAGAGAGTGGAGAAAATCTTATGCCCTCAATCGATATTAGCAAGGAGAAAAATAATCCA	2460
Db	2401	GCAGAGAGTGGAGAAAATCTTATGCCCTCAATCGATATTAGCAAGGAGAAAAATAATCCA	2460
QY	2461	GGATTCCAAACAACTGATGATGTTCAAGTAAATTTTCATGCTATAGAAAATATAAGATGATAA	2520
Db	2461	GGATTCCAAACAACTGATGATGTTCAAGTAAATTTTCATGCTATAGAAAATATAAGATGATAA	2520
QY	2521	TGAGGTGATTTTCTGTATGTAAATGTTAAATTTTCATGCTATAGAAAATATAAGATGATAA	2580
Db	2521	TGAGGTGATTTTCTGTATGTAAATGTTAAATTTTCATGCTATAGAAAATATAAGATGATAA	2580
QY	2581	AGATATCATTTAAATGTCAAAACTATGACCTCTCTTCAGAAAAAAAATTTCTCCAAAGACAAC	2640
Db	2581	AGATATCATTTAAATGTCAAAACTATGACCTCTCTTCAGAAAAAAAATTTCTCCAAAGACAAC	2640
QY	2641	ATGCCAAGGAGAGAGATCTTCATGTGACATTTGCTTTTCAGTATTTATTTCTGCTCTGGA	2700
Db	2641	ATGCCAAGGAGAGAGATCTTCATGTGACATTTGCTTTTCAGTATTTATTTCTGCTCTGGA	2700

Qy	2701	TTTGACTCTCTGTTCTCTTTCTTAATAAGAGATTTTCTATATACAGTATATATAGGAGAAAGTGT	2716
Db	2701	TTTGACTCTCTGTTCTCTTTCTTAATAAGAGATTTTCTATATACAGTATATATAGGAGAAAGTGT	2760
Qy	2761	GTATTTGGTCTCACAGGCTGTTCCAGGGATAAATCTAAATGTAAATCTCTGTGTTGAATTTCTTG	2820
Db	2761	GTATTTGGTCTCACAGGCTGTTCCAGGGATAAATCTAAATGTAAATCTCTGTGTTGAATTTCTTG	2820
Qy	2821	AAGTTGAAAACAAGGATATATCATNTGGAGCAAGTGTGTTGGATCTTGTATGGAAATATGGATG	2880
Db	2821	AAGTTGAAAACAAGGATATATCATNTGGAGCAAGTGTGTTGGATCTTGTATGGAAATATGGATG	2880
Qy	2881	GATCACATTTGTAAAGACAGTGCCTTGGGAACTGGTGTAGCTGCAAGGATTTGAGAATGGCATG	2940
Db	2881	GATCACATTTGTAAAGACAGTGCCTTGGGAACTGGTGTAGCTGCAAGGATTTGAGAATGGCATG	2940
Qy	2941	CATTAGTCTCACTTTCAATTTAAATCCATTTGTCAGGATGACATGCTTTCTTCACAGTAACTC	3000
Db	2941	CATTAGTCTCACTTTCAATTTAAATCCATTTGTCAGGATGACATGCTTTCTTCACAGTAACTC	3000
Qy	3001	AGTTCAAGTACTATGGTGAATTTGCCCTACACAGTATGTTTGGAAATCGATCATGCTTTCTTCA	3060
Db	3001	AGTTCAAGTACTATGGTGAATTTGCCCTACACAGTATGTTTGGAAATCGATCATGCTTTCTTCA	3060
Qy	3061	AGGTGACAGTCTTAAGAGAGAGAAGATCCAGGACACAGTGTAGAGGACATTTGCTTTTTCAC	3120
Db	3061	AGGTGACAGTCTTAAGAGAGAGAAGATCCAGGACACAGTGTAGAGGACATTTGCTTTTTCAC	3120
Qy	3121	TTCCCAAGTGCTTGATCAACATCTCCCTGCACAAACACAAAACCTAGAGCCAGGGGCTCCGT	3180
Db	3121	TTCCCAAGTGCTTGATCAACATCTCCCTGCACAAACACAAAACCTAGAGCCAGGGGCTCCGT	3180
Qy	3181	GAATCCCGACAGCATGCTGATAGAAACTCATTTCTACTGTTCTTACTGTGGAGTGAA	3240
Db	3181	GAATCCCGACAGCATGCTGATAGAAACTCATTTCTACTGTTCTTACTGTGGAGTGAA	3240
Qy	3241	TGGAAATTTCCAACCTGATGTTTACACCTCTGAACTGGGTACCCAGTCTCTTAAATCTTTTG	3300
Db	3241	TGGAAATTTCCAACCTGATGTTTACACCTCTGAACTGGGTACCCAGTCTCTTAAATCTTTTG	3300
Qy	3301	TATTGTCTCAGTGTGTTGAGCAGTGTCTGAGCACAAAGCAGACACTCAATTAATGCTAGA	3360
Db	3301	TATTGTCTCAGTGTGTTGAGCAGTGTCTGAGCACAAAGCAGACACTCAATTAATGCTAGA	3360
Qy	3361	TTTACACACTCAAAAAAAAAAAAAAAAAAGGGCGGCCG 3396	
Db	3361	TTTACACACTCAAAAAAAAAAAAAAAAAAGGGCGGCCG 3396	
RESULT 3			
AAC84366			
ID	AAC84366 standard; cdna; 3334 bp.		
AC	AAC84366;		
XX			
DT	19-MAR-2001 (first entry)		
XX			
DE	Human zace2 protein encoding cDNA.		
XX			
KW	zace2: metalloenzyme; angiotensin-converting enzyme; ACE; fertility;		
KW	zinc metalloproteinase; blood pressure; zinc protease; hypertension;		
KW	reticular systolic dysfunction; renal impairment; heart failure;		
KW	scleroderma renal crisis; atherosclerosis; . antinflammatory; human;		
KW	antiarthritic; bradykinin inactivator; ss.		
XX			
OS	Homo sapiens.		
XX			
FH	Key	Location/Qualifiers	
FT	CDS	35...2452	
FT	/*tag= a "zace2"		
FT	/product= "zace2"		
XX			

PN WO200070032-A1.  
XX 23-NOV-2000.  
XX 03-MAY-2000; 2000WO-US11932.  
XX 13-MAY-1999; 99US-0311482.  
PR 27-AUG-1999; 99US-0384706.  
XX (Zymo ) ZYMOGENETICS INC.  
XX Piddington CS, Petrie CR, Shoemaker KE, Bishop PD;  
XX WPI; 2001-025018/03.  
DR P-PSDB; ABA48095.  
XX  
PT Angiotensin-converting enzyme, Zace2, useful for treating inflammatory  
PT bowel disease, e.g. Crohn's disease and ulcerative colitis, or diseases  
PT associated with inflammation such as arthritis and enterocolitis -  
XX  
PS Example 1; Page 95-100; 125pp; English.  
XX  
CC The invention relates to the metalloenzyme Zace2. Zace2, an angiotensin-  
CC converting enzyme is a zinc metalloproteinase that plays roles in blood  
CC pressure regulation and fertility. Zace2 can be expressed by standard  
CC recombinant methodology. Zace2 polypeptides are useful for treating an  
CC inflammatory bowel disease (e.g. Crohn's disease and ulcerative colitis),  
CC diseases associated with inflammation like arthritis and enterocolitis,  
CC as targets for identifying modulators of zinc protease activity, for  
CC screening or identifying new angiotensin-converting enzyme (ACE)  
CC inhibitors, and as a basis for rational drug design for inhibitory  
CC molecules. The nucleic acids can be used to detect the expression of a  
CC Zace2 gene in a biological sample, as probes for in vivo diagnosis and  
CC for detecting and localizing Zace2 gene expression in tissue samples,  
CC to determine whether a subject's chromosomes contain a mutation in the  
CC Zace2 gene, and to detect aberrations associated with the Zace2 locus.  
CC Inhibitors of ACE are used for treating hypertension of various  
CC conditions, including left ventricular systolic dysfunction, progressive  
CC renal impairment, scleroderma renal crisis, congestive heart failure due  
CC to dysfunction, and treatment of atherosclerosis. Zace2 agonists may be  
CC used to treat infertility while Zace2 antagonists are used for inducing  
CC infertility. The present sequence represents a cDNA encoding the human  
CC Zace2 protein.  
XX  
SQ Sequence 3334 BP; 1011 A; 640 C; 754 G; 929 T; 0 other;  
  
Query Match 97.5%; Score 3309.8; DB 22; Length 3334;  
Best Local Similarity 99.8%; Pred. No. 0;  
Matches 3314; Conservative 0; Mismatches 7; Indels 0; Gaps 0;  
  
QY 51 CCGGGGCGAGTATCTTGGCTCACAGGGGACGATGTCAAGCTCTTCTGGCTCCTCTCAG 110  
DB 4 CAGTGGATGTGATCTTGGCTCACAGGGGACGATGTCAAGCTCTTCTGGCTCCTCTCAG 63  
  
QY 111 CTTTGTGTGTAACCTGCTCAGTCCACCATGTAGGACAGGCCAACACATTTTGA 170  
DB 64 CTTTGTGTGTAACCTGCTCAGTCCACCATGTAGGACAGGCCAACACATTTTGA 123  
  
QY 171 CAAGTTTAAACCAAGCCGACGACCTGTCTATCAAGTTCACCTTCTTGGAAATTA 230  
DB 124 CAAGTTTAAACCAAGCCGACGACCTGTCTATCAAGTTCACCTTCTTGGAAATTA 183  
  
QY 231 TAACACCAATATTACTGAAGAGAAATGCCAAAACATGAATATGCTGGGACAAATGGTC 290  
DB 184 TAACACCAATATTACTGAAGAGAAATGCCAAAACATGAATATGCTGGGACAAATGGTC 243  
  
QY 291 TGCCCTTTTAAAGGACAGTCCACACTTGCCTCAAAATGTATCCACTACAAGAAATTCAGAA 350  
DB 244 TGCCCTTTTAAAGGACAGTCCACACTTGCCTCAAAATGTATCCACTACAAGAAATTCAGAA 303  
  
QY 351 TCTCACAGTCAAGCTTCAGCTGAGGCTCTTCAGCAAAATGGCTCTTCAGTCTGCTCAGA 410  
DB 304 TCTCACAGTCAAGCTTCAGCTGAGGCTCTTCAGCAAAATGGCTCTTCAGTCTGCTCAGA 363

QY 411 AGACAAGACGAACGGTTGAACACAAATTTCTAAATACAATGAGCACCATCTACAGTACTGG 470  
DB 364 AGACAAGACGAACGGTTGAACACAAATTTCTAAATACAATGAGCACCATCTACAGTACTGG 423  
  
QY 471 AAAAGTTTGTAAACCCAGATAATCCCAAGAAATGCTTATTACTTTGAACCAAGTTTGAATGA 530  
DB 424 AAAAGTTTGTAAACCCAGATAATCCCAAGAAATGCTTATTACTTTGAACCAAGTTTGAATGA 483  
  
QY 531 AATAATGGCAACACAGTTTAGACTTACAAATGAGAGGCTCTGGGCTTGGGAAGCTGGAGATC 590  
DB 484 AATAATGGCAACACAGTTTAGACTTACAAATGAGAGGCTCTGGGCTTGGGAAGCTGGAGATC 543  
  
QY 591 TGAGGTGCGCAACAGCTGAGGCCATTTATGAAGAGTATGTGCTCTGAAATAATCAGAT 650  
DB 544 TGAGGTGCGCAACAGCTGAGGCCATTTATGAAGAGTATGTGCTCTGAAATAATCAGAT 603  
  
QY 651 GGAAGAGCAAAATCATTTATGAGGACTATGGGATTTATGGAGAGGAGACTATGAAGTAA 710  
DB 604 GGAAGAGCAAAATCATTTATGAGGACTATGGGATTTATGGAGAGGAGACTATGAAGTAA 663  
  
QY 711 TGGGGTAGATGGCTATGACTACAGCCGCGCCAGTTGATTTGAAGATGTGGAACATACCTT 770  
DB 664 TGGGGTAGATGGCTATGACTACAGCCGCGCCAGTTGATTTGAAGATGTGGAACATACCTT 723  
  
QY 771 TGAAGATTTAAACCATTTATGAACATCTTCATGCTATGTGAGGCAAGTTGATGAA 830  
DB 724 TGAAGATTTAAACCATTTATGAACATCTTCATGCTATGTGAGGCAAGTTGATGAA 783  
  
QY 831 TGCCTATCTCTTATATGATGCTCAATTTGGATGCTCCCTGCTCATTTGCTTGGTGNAT 890  
DB 784 TGCCTATCTCTTATATGATGCTCAATTTGGATGCTCCCTGCTCATTTGCTTGGTGNAT 843  
  
QY 891 GTGGGTAGATTTTGGACAATCTGTACTCTTGGACAGTTCCCTTTGGACAGAAACAAA 950  
DB 844 GTGGGTAGATTTTGGACAATCTGTACTCTTGGACAGTTCCCTTTGGACAGAAACAAA 903  
  
QY 951 CATAGATTTACTCATGCAATGGTGGACCGCTGGATGTCACAGAGAATATTCAGGA 1010  
DB 904 CATAGATTTACTGCAATGGTGGACCGCTGGATGTCACAGAGAATATTCAGGA 963  
  
QY 1011 GGCCGAGAAGTTCTTGTATCTGTTGGTCTTCTTAAATATGACTCAAGGATTTCTGGGAAA 1070  
DB 964 GGCCGAGAAGTTCTTGTATCTGTTGGTCTTCTTAAATATGACTCAAGGATTTCTGGGAAA 1023  
  
QY 1071 TTCCATGCTAACGGACCCAGCAATGTTCAAGAACAGCTCTGCCATCCACAGCTTGGGA 1130  
DB 1024 TTCCATGCTAACGGACCCAGCAATGTTCAAGAACAGCTCTGCCATCCACAGCTTGGGA 1083  
  
QY 1131 CCTGGGAAGGGGCACTTCAGGATCTTATGTCACAAAGGTGACAATGGACGACTTCCT 1190  
DB 1084 CCTGGGAAGGGGCACTTCAGGATCTTATGTCACAAAGGTGACAATGGACGACTTCCT 1143  
  
QY 1191 GACAGCTCATCATGAGATGGGCAATCCAGTATGATGTCATATGTCGACAACTTT 1250  
DB 1144 GACAGCTCATCATGAGATGGGCAATCCAGTATGATGTCATATGTCGACAACTTT 1203  
  
QY 1251 TCTGCTAGAATAAGGCTTAATGAGGATTCATGAAGCTTGGGGAATCATGTCTACT 1310  
DB 1204 TCTGCTAGAATAAGGCTTAATGAGGATTCATGAAGCTTGGGGAATCATGTCTACT 1263  
  
QY 1311 TCTGCTAGCCACACCTAAAGCATTTAAATTCATTTGCTGTACCCGATTTTCAAGA 1370  
DB 1264 TCTGCTAGCCACACCTAAAGCATTTAAATTCATTTGCTGTACCCGATTTTCAAGA 1323  
  
QY 1371 AGACAATGAACAGAAATAAATCTCTCTCAACAACTCATGATGTTGGGACTCT 1430  
DB 1324 AGACAATGAACAGAAATAAATCTCTCTCAACAACTCATGATGTTGGGACTCT 1383  
  
QY 1431 GCCATTTACTTACATGTTAGAGAGTGGAGTGGTGGTCTTTAAAGGGGAAATTTCCAA 1490  
DB 1384 GCCATTTACTTACATGTTAGAGAGTGGAGTGGTGGTCTTTAAAGGGGAAATTTCCAA 1443









|||||  
Db 1029 TTCCATGCTAACGGAGCCAGGAAATGTTCAGAAAGCAGCTGCTCCATCCACAGCTTGGGA 1088  
QY 1131 CTTGGGGAAGCGGCACTTCAGGATCCTTATGTGCAAAAGGTGACAATGGAGCACTTCCT 1190  
Db 1089 CTTGGGGAAGCGGCACTTCAGGATCCTTATGTGCAAAAGGTGACAATGGAGCACTTCCT 1148  
QY 1191 GACAGCTCATCATGAGATGGGSCATATCCAGTATGATATGGCATATGCTGCACAACTTT 1250  
Db 1149 GACAGCTCATCATGAGATGGGSCATATCCAGTATGATATGGCATATGCTGCACAACTTT 1208  
QY 1251 TCTGCTAAGAAATGAGCTAATGAAGGATTCATGAAGCTGTGGGGAATCATGTCTACT 1310  
Db 1209 TCTGCTAAGAAATGAGCTAATGAAGGATTCATGAAGCTGTGGGGAATCATGTCTACT 1268  
QY 1311 TTCTGCAGCCACCTAAAGCATTTAAATCCATTTGGTCTTCTGTCACCCGATTTTCAAGA 1370  
Db 1269 TTCTGCAGCCACCTAAAGCATTTAAATCCATTTGGTCTTCTGTCACCCGATTTTCAAGA 1328  
QY 1371 AGACAATGAACAGAAATAAATTCCTGCTCAAAACAGCACTCACGATTTGTTGGGACTCT 1430  
Db 1329 AGACAATGAACAGAAATAAATTCCTGCTCAAAACAGCACTCACGATTTGTTGGGACTCT 1388  
QY 1431 GCCATTTTACTTACATGTTAGAGAAGTGGAGTGGATGCTTTTAAAGGGGAATTTCCCAA 1490  
Db 1389 GCCATTTTACTTACATGTTAGAGAAGTGGAGTGGATGCTTTTAAAGGGGAATTTCCCAA 1448  
QY 1491 AGACCAGTGGATGAAAAAGTGGTGGGAGATGAAGCGAGAGATAGTGGGTGGTGGAAAC 1550  
Db 1449 AGACCAGTGGATGAAAAAGTGGTGGGAGATGAAGCGAGAGATAGTGGGTGGTGGAAAC 1508  
QY 1551 TGTGCCCCATGATGAACATATCTGTGACCCGCACTCTCTGTTCCATGTTTCTAATGATTA 1610  
Db 1509 TGTGCCCCATGATGAACATATCTGTGACCCGCACTCTCTGTTCCATGTTTCTGATGATTA 1568  
QY 1611 CTCATTTCATTCGATATTACAAAGGACCTTTACCAATTCAGTTCCTCAAGAAGCACTTTG 1670  
Db 1569 CTCATTTCATTCGATATTACAAAGGACCTTTACCAATTCAGTTCCTCAAGAAGCACTTTG 1628  
QY 1671 TCAAGCAGCTAAACATGAAGCCCTCTGCACAAATGTGACATCTCAACCTCTACAGAAGC 1730  
Db 1629 TCAAGCAGCTAAACATGAAGCCCTCTGCACAAATGTGACATCTCAACCTCTACAGAAGC 1688  
QY 1731 TGGACAGAACTGTT----- 1745  
Db 1689 TGGACAGAACTGTTGAAGAAATACCTCAAAATGTTGAACCTCTCCTAGTATTCAGTAT 1748  
QY 1746 ----- 1745  
Db 1749 TACTCATTTCCATGCTAGGTTTGTATTTGATTTCTTTGTTCTAAAAAGAAAAATTTATG 1808  
QY 1746 ----- 1745  
Db 1809 GCCTCAAAATGCTCATTTTACAACCAAAACATTTAATTTGTGTGCAGAGAACCTAG 1868  
QY 1746 ----- 1745  
Db 1869 ACCATACAACAAATTTGGGTGGCCACCCTTTTCTCCCTCATATAACTACAGCCCTCTCT 1928  
QY 1746 ----- 1745  
Db 1929 CCTGGTAATTGGAAGGAAAGAGCGGTTTAGGGTGGAAATATCTGTTAATATGCAATTCCT 1988  
QY 1746 ----- 1745  
Db 1989 TTCTTATCTGCCAGAGCAAAATTTAGCCAAGTCAAGAGAGAGAACCATAGATCATAGAT 2048  
QY 1746 -----C 1746  
Db 2049 GTAAATATATGTACATCTGGAACCCCTCAAAAGGCCCTGAACCCCTTTTGTGTAGC 2108  
QY 1747 AATATCTGAGGCTTGGAAATCAGAACCTTGACCCCTAGCATTTGGAAATGTTGTAGGA 1806  
|||||

Db 2109 AATATGCTGAGGCTTGGAAATCAGAAATCAGAACCCCTGGACCCTAGCATTTGGAATAATGTTGTAGGA 2168  
QY 1807 GCAAGAACATGAATGTAAGCCCACTGCTCAACTACTTTTGGCCCTTATTTACTTGCTG 1866  
Db 2169 GC-AAGAACATGAATGTAAGCCCACTGCTCAACTACTTTTGGCCCTTATTTACTTGCTG 2227  
QY 1867 AAGACCAGAACAGAAATCTTTTGTGGATGGAGTACCCGACTGGAGTCCATATGACAGA- 1925  
Db 2228 AAGACCAGAACAGAAATCTTTTGTGGATGGAGTACCCGACTGGAGTCCATATGCGAGC 2287  
QY 1926 CCAAGCATCAAAAGTGAAGATAAGCCTAATAATCAGCTCTTTGGAGATAAAGCATATGAATG 1985  
Db 2288 CCAAGCATCAAAAGTGAAGATAAGCCTAATAATCAGCTCTTTGGAGATAAAGCATATGAATG 2347  
QY 1986 GAACGACAATGAATGTACCTGTTTCCGATCATCTGTTTGCATATGCTATGAGGCACTACT 2045  
Db 2348 GAACGACAATGAATGTACCTGTTTCCGATCATCTGTTTGCATATGCTATGAGGCACTACT 2407  
QY 2046 TTTAAAAAGTAAAAAATCAGATGATCTTTTGGGAGGAGGATGCGGAGTGGCTAATTT 2105  
Db 2408 TTTAAAAAGTAAAAAATCAGATGATCTTTTGGGAGGAGGATGCGGAGTGGCTAATTT 2467  
QY 2106 GAAACCAAGATCTCCTTTAATTTCTTTGTCACCTGACCTAAAAATGTCTGATATCAT 2165  
Db 2468 GAAACCAAGATCTCCTTTAATTTCTTTGTCACCTGACCTAAAAATGTCTGATATCAT 2527  
QY 2166 TCCTAGAACTGAAGTTGAAAAGGCCATCAGGATGTCCCGAGCCGTATCAATGATGCTTT 2225  
Db 2528 TCCTAGAACTGAAGTTGAAAAGGCCATCAGGATGTCCCGAGCCGTATCAATGATGCTTT 2587  
QY 2226 CCGTCTCAATGACAACAGCCTAGAGTTTCTGGGATACAGCCCAACACTTTCGACCTCCTAA 2285  
Db 2588 CCGTCTCAATGACAACAGCCTAGAGTTTCTGGGATACAGCCCAACACTTTCGACCTCCTAA 2647  
QY 2286 CCAGCCCCCTGTTTCCATATGGCTGATGTTTGGAGTTGTGATGGAGTGTAGTGGT 2345  
Db 2648 CCAGCCCCCTGTTTCCATATGGCTGATGTTTGGAGTTGTGATGGAGTGTAGTGGT 2707  
QY 2346 TGGCATTTGCTCATCCTGATCTTCACTGGGATCAGATCGGAAGAAGAAAAATTAAGCAAG 2405  
Db 2708 TGGCATTTGCTCATCCTGATCTTCACTGGGATCAGAGATCGGAAGAAGAAAAATTAAGCAAG 2767  
QY 2406 AAGTGGAGAAAAATCCTTTATGCCCTCCATCGATATTAGCAAAAGGAGAAAAATTAATCCAGATT 2465  
Db 2768 AAGTGGAGAAAAATCCTTTATGCCCTCCATCGATATTAGCAAAAGGAGAAAAATTAATCCAGATT 2827  
QY 2466 CCAAAACATGATGATGTTTCAGACCTCCTTTTAGAAAAATCTATGTTTTTCTCTTTGAGG 2525  
Db 2828 CCAAAACATGATGATGTTTCAGACCTCCTTTTAGAAAAATCTATGTTTTTCTCTTTGAGG 2887  
QY 2526 TGATTTTGTGATGTAATGTTAATTTCAATGATAGAAAAATATAGATGATAAAGATA 2585  
Db 2888 TGATTTTGTGATGTAATGTTAATTTCAATGATAGAAAAATATAGATGATAAAGATA 2947  
QY 2586 TCATTAATGTCAAAACATGACTCTGTTTCAGAAAAAAATTTCTCCAAAGACAACTGGC 2645  
Db 2948 TCATTAATGTCAAAACATGACTCTGTTTCAGAAAAAAATTTCTCCAAAGACAACTGGC 3007  
QY 2646 CAAGGAGAGAGCATCTTCATTTGACATTTGCTTTCAGTATTTATTTCTGCTCTGGATTTGA 2705  
Db 3008 CAAGGAGAGAGCATCTTCATTTGACATTTGCTTTCAGTATTTATTTCTGCTCTGGATTTGA 3067  
QY 2706 CTTCCTCTTCTGTTCTTAATAAGGATTTTGTATTACAGTATATTAGGGAAGTGTGTATT 2765  
Db 3068 CTTCCTCTTCTGTTCTTAATAAGGATTTTGTATTACAGTATATTAGGGAAGTGTGTATT 3127  
QY 2766 TGTCTCTCACAGGCTGTTTCAGGGATAATCTAAATGTAATGTCTGTTGTAATTTCTGAAGTT 2825  
Db 3128 TGTCTCTCACAGGCTGTTTCAGGGATAATCTAAATGTAATGTCTGTTGTAATTTCTGAAGTT 3187  
QY 2826 GAAACCAAGATATATCATTTGGAGCAAGTGTGGATCTTTGATGGAAATATGGATGGATCA 2885  
Db 3188 GAAACCAAGATATATCATTTGGAGCAAGTGTGGATCTTTGATGGAAATATGGATGGATCA 3247

QY 2886 CTTGTAAGCAGTGCCTGGAACTGGTGTAGCTGCAAGGATTGAGAAATGCGATGCAATTA 2945  
|||||  
Db 3248 CTTGTAAGCAGTGCCTGGAACTGGTGTAGCTGCAAGGATTGAGAAATGCGATGCAATTA 3307  
|||||  
QY 2946 GCTCAGTTTCATTTAAATCCATTGTCAAGGATGACATGCTTTTCACAGTAATCACTTC 3005  
|||||  
Db 3308 GCTCAGTTTCATTTAAATCCATTGTCAAGGATGACATGCTTTTCACAGTAATCACTTC 3367  
|||||  
QY 3006 AAGTACTATGTGATTTGCCCTACAGTGTGTTTGGAAATCGATCATGCTTTCTTCAAGGTG 3065  
|||||  
Db 3368 AAGTACTATGTGATTTGCCCTACAGTGTGTTTGGAAATCGATCATGCTTTCTTCAAGGTG 3427  
|||||  
QY 3066 ACAGTCTTAAAGAGAGAAAGATCCAGGGAACAGGTAGAGGACATTTGCTTTTTCACCTTCCA 3125  
|||||  
Db 3428 ACAGTCTTAAAGAGAGAAAGATCCAGGGAACAGGTAGAGGACATTTGCTTTTTCACCTTCCA 3487  
|||||  
QY 3126 AGGTGCTTGTATCAACATCTCCCTGACACACAAACATAGAGCCAGGGCCCTCCCTGAAC 3185  
|||||  
Db 3488 AGGTGCTTGTATCAACATCTCCCTGACACACAAACATAGAGCCAGGGCCCTCCCTGAAC 3547  
|||||  
QY 3186 -CCAGAGCATGCCCTGATAGAACTCACTTCTACTGTGTTCTCTAACTGTGGAGTGAATGGA 3244  
|||||  
Db 3548 CCCAGAGCATGCCCTGATAGAACTCACTTCTACTGTGTTCTCTAACTGTGGAGTGAATGGA 3607  
|||||  
QY 3245 AATTCCTCACTGTATGTTTCAACCTCTGAAGTGGGTACCCAGTCTCTTAAATCTTTTGTATT 3304  
|||||  
Db 3608 AATTCCTCACTGTATGTTTCAACCTCTGAAGTGGGTACCCAGTCTCTTAAATCTTTTGTATT 3667  
|||||  
QY 3305 TGCTCAGAGTGTGAGCAGTGTGAGCAGACAAAGCAGACACTCAATTAATGCTAGATTTA 3364  
|||||  
Db 3668 TGCTCAGAGTGTGAGCAGTGTGAGCAGACAAAGCAGACACTCAATTAATGCTAGATTTA 3727  
|||||  
QY 3365 CACA 3368  
|||  
Db 3728 CAAA 3731

RESULT 5  
AA259465  
ID AA259465 standard; DNA; 2418 BP.  
XX  
AC AA259465;  
XX  
DT 11-APR-2000 (first entry)  
XX  
DE Human MPROT15 coding sequence #1.  
XX  
KW MPROT15; treatment; hypertension; human; myocardial disease; apoplexy;  
KW heart disease; apoplexy; heart disease; nervous denaturation; ds;  
KW Alzheimer's disease; hormone; cytokine.  
XX  
OS Homo sapiens.  
XX  
PN JP11318472-A.  
XX  
PD 24-NOV-1999.  
XX  
PF 22-JAN-1999; 99JP-0014949.  
XX  
PR 13-MAY-1998; 98GB-0010373.  
PR 18-AUG-1998; 98GB-0018009.  
XX  
XX (SMIK ) SMITHKLINE BEECHAM PLC.  
XX  
DR WPI; 2000-109268/10.  
DR P-PSDB; AAY67310.  
XX  
PT MPROT15 polypeptide and MPROT15 polynucleotides - useful for the  
PT treatment of hypertension, myocardial diseases, apoplexy, heart  
PT diseases, nervous denaturation, Alzheimer's disease etc.  
XX  
PS Claim 7; Page 14; 22pp; Japanese.

XX This is the coding sequence of human MPROT15. The MPROT15 polynucleotide  
CC and polypeptide sequences can be used for the treatment of hypertension,  
CC myocardial diseases, apoplexy, heart diseases, nervous denaturation,  
CC Alzheimer's disease and diseases related to the processing of peptide  
CC hormones and cytokines.  
XX  
SQ Sequence 2418 BP; 744 A; 484 C; 555 G; 635 T; 0 other;  
Query Match 71.2%; Score 2416.4; DB 21; Length 2418;  
Best Local Similarity 100.0%; Pred. No. 0;  
Matches 2417; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 82 ATGTCAGGCTTTCCTGGGCTCCTTCTCAGCCTTGTGCTGTAAGTCTGCTCAGTCCACC 141  
|||||  
Db 1 ATGTCAGGCTTTCCTGGGCTCCTTCTCAGCCTTGTGCTGTAAGTCTGCTCAGTCCACC 60  
|||||  
QY 142 ATTGAGGACAGCCCAAGACATTTTGGGACAAAGTTTAAACACAGCCGAAGACCTGTTTC 201  
|||||  
Db 61 ATTGAGGACAGCCCAAGACATTTTGGGACAAAGTTTAAACACAGCCGAAGACCTGTTTC 120  
|||||  
QY 202 TATCAAGTTTCACTTGTCTTGGAAATTAACACCAATATTAATGAGAGAAATGTCCTAA 261  
|||||  
Db 121 TATCAAGTTTCACTTGTCTTGGAAATTAACACCAATATTAATGAGAGAAATGTCCTAA 180  
|||||  
QY 262 AACATGAATTAATGCTGGGACAAATGGTCTGCCCTTTTAAAGGAAACAGTCCACACTGCC 321  
|||||  
Db 181 AACATGAATTAATGCTGGGACAAATGGTCTGCCCTTTTAAAGGAAACAGTCCACACTGCC 240  
|||||  
QY 322 CAATGTATCACTTACAAAGAAATTCAGAAATCTCAGAGTCAAGCTTCAGCTGCAAGGCTCTT 381  
|||||  
Db 241 CAATGTATCACTTACAAAGAAATTCAGAAATCTCAGAGTCAAGCTTCAGCTGCAAGGCTCTT 300  
|||||  
QY 382 CAGCAAAATGGGTCTTCAGTGTCTCAGAAAGACAGCAAAACGGTTGAAACACAAATCTTA 441  
|||||  
Db 301 CAGCAAAATGGGTCTTCAGTGTCTCAGAAAGACAGCAAAACGGTTGAAACACAAATCTTA 360  
|||||  
QY 442 AATCAATGAGCACCCTCTACAGTACTGGAAGATTTGTAACCCAGATATCCACAGAA 501  
|||||  
Db 361 AATCAATGAGCACCCTCTACAGTACTGGAAGATTTGTAACCCAGATATCCACAGAA 420  
|||||  
QY 502 TGCTTATTACTTGAACCCAGGTTTGAATGAAATATGCAACAGTCTTGTAGACTCAATGAG 561  
|||||  
Db 421 TGCTTATTACTTGAACCCAGGTTTGAATGAAATATGCAACAGTCTTGTAGACTCAATGAG 480  
|||||  
QY 562 AGGCTCTGGGCTTGGGAAAGCTGAGATCTGAGTCCGGCAAGCAGCTGAGGCCATTATAT 621  
|||||  
Db 481 AGGCTCTGGGCTTGGGAAAGCTGAGATCTGAGTCCGGCAAGCAGCTGAGGCCATTATAT 540  
|||||  
QY 622 GAAGAGTATGTGGTCTTGAAGAAATGAGATGCAAGAGCAAAATCAATATGAGGACTATGGG 681  
|||||  
Db 541 GAAGAGTATGTGGTCTTGAAGAAATGAGATGCAAGAGCAAAATCAATATGAGGACTATGGG 600  
|||||  
QY 682 GATTATTGGAGAGAGACTATGAAGTAAATGGGTAGATGGCTATGACTACAGCCGGGC 741  
|||||  
Db 601 GATTATTGGAGAGAGACTATGAAGTAAATGGGTAGATGGCTATGACTACAGCCGGGC 660  
|||||  
QY 742 CAGTTGATTGAAGATGTGGAAACATACCTTTGAAAGAGATTAACCATTAATATGAAACATCTT 801  
|||||  
Db 661 CAGTTGATTGAAGATGTGGAAACATACCTTTGAAAGAGATTAACCATTAATATGAAACATCTT 720  
|||||  
QY 802 CATGCTATGTGAGGCAAAAGTTCATGAATGCCCTATCCTTCTATATCAGTCCCAATGGA 861  
|||||  
Db 721 CATGCTATGTGAGGCAAAAGTTCATGAATGCCCTATCCTTCTATATCAGTCCCAATGGA 780  
|||||  
QY 862 TGCCTCCCTGCTCATTTGCTTGGTGTATGTGGGTAGATTTTGGACAAAATCTGTACTCT 921  
|||||  
Db 781 TGCCTCCCTGCTCATTTGCTTGGTGTATGTGGGTAGATTTTGGACAAAATCTGTACTCT 840  
|||||  
QY 922 TTGACAGTTCCTTTGGACAGAAACCAACATAGATGTTACTGATGCAATGTTGGACAG 981  
|||||  
Db 841 TTGACAGTTCCTTTGGACAGAAACCAACATAGATGTTACTGATGCAATGTTGGACAG 900  
|||||

QY 982 GCCTGGATGCACAGAAATATCAAGGAGCGCGAAGTCTTTGTATCTGTGGTCTT 1041  
|||||  
Db 901 GCCTGGATGCACAGAAATATCAAGGAGCGCGAAGTCTTTGTATCTGTGGTCTT 960  
QY 1042 CCTAATATGACTCAAGGATCTCGGAAATTCATGTCAAGGAGCGCGAAGTCTTCA 1101  
|||||  
Db 961 CCTAATATGACTCAAGGATCTCGGAAATTCATGTCAAGGAGCGCGAAGTCTTCA 1020  
|||||  
QY 1102 AAAGCAGTCTGCCATCCACAGCTTGGGACCTGGGAGGCGGACCTTCAGGATCCCTTATG 1161  
|||||  
Db 1021 AAAGCAGTCTGCCATCCACAGCTTGGGACCTGGGAGGCGGACCTTCAGGATCCCTTATG 1080  
QY 1162 TGCACAAAGGTGACAATGGAGGACTCTCTGACAGCTCATCATGAGATGGGCGATATCCAG 1221  
|||||  
Db 1081 TGCACAAAGGTGACAATGGAGGACTCTCTGACAGCTCATCATGAGATGGGCGATATCCAG 1140  
QY 1222 TATGATATGGCATATGCTGCAACACCTTTCTGCTAAGAAATGAGCTAATGAAGATTC 1281  
|||||  
Db 1141 TATGATATGGCATATGCTGCAACACCTTTCTGCTAAGAAATGAGGCTAATGAAGATTC 1200  
QY 1282 CATGAAGCTGTGGGAAATCATGTCACTTTCTGACGCCACACCTAAGCATTTAAATCC 1341  
|||||  
Db 1201 CATGAAGCTGTGGGAAATCATGTCACTTTCTGACGCCACACCTAAGCATTTAAATCC 1260  
QY 1342 ATTGCTCTCTGTCAACCGATTTTCAAGAAGCAATGAACAGAAATAAACTTCCCTGCTC 1401  
|||||  
Db 1261 ATTGCTCTCTGTCAACCGATTTTCAAGAAGCAATGAACAGAAATAAACTTCCCTGCTC 1320  
QY 1402 AAACAGCACTCACGATTTTGGGACTCTGCCATTTACTTTACATGTTAGAGAAGTGSAGG 1461  
|||||  
Db 1321 AAACAGCACTCACGATTTTGGGACTCTGCCATTTACTTTACATGTTAGAGAAGTGSAGG 1380  
QY 1462 TCGATGCTCTTAAAGGGGAATTTCCCAAGACCACTGGATGAAAAAGTGGTGGGAGATG 1521  
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Db 1381 TCGATGCTCTTAAAGGGGAATTTCCCAAGACCACTGGATGAAAAAGTGGTGGGAGATG 1440  
QY 1522 AAGCGAGAGATAGTTGGGGTGGTGGAACTGTGCCCATGATGAACATATCTGTGACCCC 1581  
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Db 1441 AAGCGAGAGATAGTTGGGGTGGTGGAACTGTGCCCATGATGAACATATCTGTGACCCC 1500  
QY 1582 GCATCTGTCCATGTTTCTAATGATTACTCATTCATTCGATTTACACAAAGGACCCCTT 1641  
|||||  
Db 1501 GCATCTGTCCATGTTTCTAATGATTACTCATTCATTCGATTTACACAAAGGACCCCTT 1560  
QY 1642 TACCAATTCAGTTTCAAGAAGCACTTTGTCAAGCAGCTAAACATGAAGCCCTCTGSCAC 1701  
|||||  
Db 1561 TACCAATTCAGTTTCAAGAAGCACTTTGTCAAGCAGCTAAACATGAAGCCCTCTGSCAC 1620  
QY 1702 AATGTGACATCTCAAACTCTACAGAAGCTGGACAGAACTGTTCAATATGCTGAGGCTT 1761  
|||||  
Db 1621 AATGTGACATCTCAAACTCTACAGAAGCTGGACAGAACTGTTCAATATGCTGAGGCTT 1680  
QY 1762 GGAATATCAGAACCCCTGGACCCCTAGCATTTGGAATGTTGTAGGAGCAAAAGACATGAAT 1821  
|||||  
Db 1681 GGAATATCAGAACCCCTGGACCCCTAGCATTTGGAATGTTGTAGGAGCAAAAGACATGAAT 1740  
QY 1822 GTAAGGCCACTGCTCACTACTTTGAGCCCTTATTTACCTGGCTGGAAGACCAAGAACAG 1881  
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Db 1741 GTAAGGCCACTGCTCACTACTTTGAGCCCTTATTTACCTGGCTGGAAGACCAAGAACAG 1800  
QY 1882 AATCTTTTGTGGGATGGATACCGACTGGAGTCCATATGAGACCAAAAGCATCAAAAGTG 1941  
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Db 1801 AATCTTTTGTGGGATGGATACCGACTGGAGTCCATATGAGACCAAAAGCATCAAAAGTG 1860  
QY 1942 AGGATAAGCCTAAATACAGCTCTTTGGAGATAAAGCATATGAATGGAAACGACATGAATG 2001  
|||||  
Db 1861 AGGATAAGCCTAAATACAGCTCTTTGGAGATAAAGCATATGAATGGAAACGACATGAATG 1920  
QY 2002 TACCTGTTCCGATCATCTGTGCAATCTATGAGGCACTACTTTTAAAGTAAGTAAGTAAT 2061  
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Db 1921 TACCTGTTCCGATCATCTGTGCAATCTATGAGGCACTACTTTTAAAGTAAGTAAGTAAT 1980  
QY 2062 CAGATGATTTCTTTTGGGAGGAGGATGTGGGCTGCTAATTTTGAACCAAGAAATCTCC 2121

Db 1981 CAGATGATTTCTTTTGGGAGGAGGATGTGCGAGTGGCTAATTTGAAACCAAGAACTCC 2040  
QY 2122 TTTAATTTCTTTGTCACCTGCACCTAAAATGTGTCATATCATTTCTAGAACTGAAGTT 2181  
|||||  
Db 2041 TTTAATTTCTTTGTCACCTGCACCTAAAATGTGTCATATCATTTCTAGAACTGAAGTT 2100  
|||||  
QY 2182 GAAAAGGCCATCAGGATGCTCCCGAGCGGTATCAATGATGCTTTCCGCTCTGAATGACAAC 2241  
|||||  
Db 2101 GAAAAGGCCATCAGGATGCTCCCGAGCGGTATCAATGATGCTTTCCGCTCTGAATGACAAC 2160  
QY 2242 AGCTTAGAGTTTCTGGGATACAGCAACACTTGGACCTCTTAACAGCCCTGTTTCC 2301  
|||||  
Db 2161 AGCTTAGAGTTTCTGGGATACAGCAACACTTGGACCTCTTAACAGCCCTGTTTCC 2220  
QY 2302 ATATGGCTGATGTTTGGAGTTGTGATGGAGTGTAGTGGTGGCATTTGTCATCTG 2361  
|||||  
Db 2221 ATATGGCTGATGTTTGGAGTTGTGATGGAGTGTAGTGGTGGCATTTGTCATCTG 2280  
QY 2362 ATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAAAGCAAGAAAGTGAGAAAAATCCT 2421  
|||||  
Db 2281 ATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAAAGCAAGAAAGTGAGAAAAATCCT 2340  
QY 2422 TATGCTCTCATCGATATTAGCAAGAGGAAAAATTAATCCAGATTCCAAAACACTGATGAT 2481  
|||||  
Db 2341 TATGCTCTCATCGATATTAGCAAGAGGAAAAATTAATCCAGATTCCAAAACACTGATGAT 2400  
QY 2482 GTTCAGACCTCTCTTTTAC 2499  
|||||  
Db 2401 GTTCAGACCTCTCTTTTAC 2418

RESULT 6  
AAS14880  
ID AAS14880 standard; cDNA; 2920 BP.  
XX  
AC AAS14880;  
DT 20-DEC-2001 (first entry)  
XX  
DE Human cDNA encoding novel human protein NHP #1.  
XX  
KW Human; novel human protein; NHP; ss; antidiabetic; antirheumatic;  
KW antiarthritic; cytostatic; antiarteriosclerotic; vulnary;  
KW neuroprotective; nootropic; antiparkinsonian;  
KW anti-human immunodeficiency virus; antiasthmatic; vasotropic; cardiant;  
KW hypotensive; anorectic; antiinfertility; neuroleptic; anticonvulsant;  
KW antianemic; immunosuppressive; cerebroprotective; antimicrobial;  
KW antinflammatory; antibacterial; antipsoriatic; thyromimetic;  
KW immunomodulator; antiseborrheic; dermatological; vasoconstriction;  
KW gastrointestinal disorder; cardiovascular disorder; hypertension;  
KW coronary heart disease; arteriosclerosis; anorexia; obesity; bulimia;  
KW cachexia; male infertility; impotence; testicular cancer; lung tumour;  
KW hyperproliferative disorder; pulmonary system disorder;  
KW central nervous system disorder; bone disorder;  
KW neurodegenerative disease; Alzheimer's disease; Parkinson's disease;  
KW Huntington's disease; schizophrenia; mania; dementia; paranoia;  
KW panic disorder; learning disability; amyotrophic lateral sclerosis;  
KW psychosis; autism; sleep disorder; immune system disorder;  
KW Hashimoto's thyroiditis; musculo-skeletal system disorders;  
KW multiple sclerosis; ischaemic brain injury; stroke; infectious disease;  
KW diabetes mellitus; immunological disorder; asthma; AIDS;  
KW acquired immunodeficient syndrome; leukaemia; rheumatoid arthritis;  
KW inflammatory bowel disease; sepsis; acne; psoriasis; lupus erythematosus;  
KW neural system disorder; respiratory disorder; olfactory disorder;  
KW wound healing; chromosome X.  
OS Homo sapiens.  
FH Key Location/Qualifiers  
CDS 213..2348  
FT /\*tag= a  
FT /product= "NHP #1"

/transl\_except= (pos:867..869,aa:Xaa)  
/transl\_except= (pos:930..932,aa:Xaa)  
/transl\_except= (pos:1707..1709,aa:Xaa)  
/note= "Xaa= Any amino acid"

W0200174896-A1.

11-OCT-2001.

02-APR-2001; 2001WO-US10542.

03-APR-2000; 2000US-194118P.

29-SEP-2000; 2000US-236384P.

(HUMA-) HUMAN GENOME SCI INC.

Moore PA, Ni J, Soppet DR, Coleman TA, Gentz RL, Endress GA;  
Li Y, Dillon PJ;

WPI; 2001-626394/72.

P-PSDB; AAU09092.

New human proteins, useful for diagnosing, treating, preventing and/or  
prognosing disorders related to the proteins, including cardiovascular  
disorders, autoimmune disorders and reproductive disorders -

Claim 1; Page 291-292; 318pp; English.

The invention relates to novel human proteins (NHP) and the  
nucleic acids that encode them and antibodies raised against them.  
The proteins, antibodies and nucleic acids are useful in the diagnosis,  
prognosis, prevention and/or treatment of diseases and/or disorders  
involving vasoconstriction, gastrointestinal disorders, cardiovascular  
disorders (e.g. hypertension, erectile dysfunction, high blood pressure,  
coronary heart disease and arteriosclerosis), anorexia, obesity, bulimia,  
cachexia, disorders of small intestine, disorders of reproductive system  
(e.g. male infertility and/or impotence), testicular cancer, lung tumours  
and other hyperproliferative disorders, disorders of pulmonary system,  
central nervous system disorders, bone disorders, neurodegenerative  
diseases and behavioural disorders (e.g. Alzheimer's disease, Parkinson's  
disease, Huntington's disease, schizophrenia, mania, dementia, paranoia,  
panic disorder, learning disabilities, amyotrophic lateral sclerosis,  
psychoses, autism, sleep disorders), immune system disorders (e.g.  
Hashimoto's thyroiditis), renal and musculo-skeletal system disorders,  
central nervous system disorders (e.g. multiple sclerosis, ischaemic  
brain injury and/or stroke), infectious diseases, diabetes mellitus,  
immunological disorders (e.g. asthma, acquired immunodeficient syndrome  
(AIDS), leukaemia, rheumatoid arthritis, inflammatory bowel disease,  
sepsis, acne, psoriasis and lupus erythematosus), neural system  
disorders, respiratory disorders, olfactory disorders and wound  
healing. The present sequence encodes an NHP of the invention and  
is located on the X chromosome.

Sequence 2920 BP; 897 A; 568 C; 654 G; 788 T; 13 other;

Query Match 67.7%; Score 2297.4; DB 22; Length 2920;  
Best Local Similarity 99.3%; Pred. No. 0;  
Matches 2323; Conservative 4; Mismatches 11; Indels 2; Gaps 2;

QY 53 GGGCAGGTATCTGGCTCACAGGGGACCATGTCAGCTCTCCCGGCTCTTCACGCC 112

1 GTGGATGTGATCTTGGCTCCCGGGGACCATGTC-AGCTCTTCCTGGCTCTTCACGCC 59

QY 113 TTGTTGCTGTAAGTGTGCTCAGTCCACCATTGAGGAACAGGCCCAAGACATTTT -GGAC 171

60 TTGTTGCTGTAAGTGTGCTCAGTCCACCATTGAGGAACAGGCCCAAGACATTTTGGGAC 119

QY 172 AAGTTTAACCAAGCCCAAGACCTGTTCTATCAAGTTCACTTGCCTCTTGGAAATAT 231

120 AAGTTTAACCAAGCCCAAGACCTGTTCTATCAAGTTCACTTGCCTCTTGGAAATAT 179

QY 232 AACCACAATATTACTGAAGAGAAATGCCAAAACATGAATAATGCTGGGGCAAAATGGTCT 291

Db 180 AACACCAATATTACTGACAGAGAAATGCCAAAACATGAATAATGCTGGGGCAAAATGGTCT 239

QY 292 GCCTTTTAAAGAACAGTCCACACTTGGCCCAAAATGTTATCCACTACAAGAAATTCAGAAAT 351

Db 240 GCCTTTTAAAGAACAGTCCACACTTGGCCCAAAATGTTATCCACTACAAGAAATTCAGAAAT 299

QY 352 CTCACAGTCAAGCTTTCAGCTGCAGGCTCTTTCAGCAAAATGGTCTTTCAGTCTGCTGTCAGAA 411

Db 300 CTCACAGTCAAGCTTTCAGCTGCAGGCTCTTTCAGCAAAATGGTCTTTCAGTCTGCTGTCAGAA 359

QY 412 GACAAGAGCAAAAGGTTGAACAAATTTAAATAACAATGAGCACCACATACAGTACTGGA 471

Db 360 GACAAGAGCAAAAGGTTGAACAAATTTAAATAACAATGAGCACCACATACAGTACTGGA 419

QY 472 ARAAGTTTGAACCCAGATAATCCACAAGAAATGCTTATTTACTTTGAACCAAGGTTTGAATGAA 531

Db 420 ARAAGTTTGAACCCAGATAATCCACAAGAAATGCTTATTTACTTTGAACCAAGGTTTGAATGAA 479

QY 532 ATAATGCCAAACAGTTTAGACTACAATGAGAGGCTCTGGGCTTTGGGAAAGCTGGAGATCT 591

Db 480 ATAATGCCAAACAGTTTAGACTACAATGAGAGGCTCTGGGCTTTGGGAAAGCTGGAGATCT 539

QY 592 GAGGTCCGCAAGCAGCTGAGGCCATATATGAGAGAGTATGTTGGTCTTGAAAATGAGATG 651

Db 540 GAGGTCCGCAAGCAGCTGAGGCCATATATGAGAGAGTATGTTGGTCTTGAAAATGAGATG 599

QY 652 GCAAGAGCAAAATCATTATGAGGACTATGGGATTTATGGAGAGGAGACTATGAAATGAAAT 711

Db 600 GCAAGAGCAAAATCATTATGAGGACTATGGGATTTATGGAGAGGAGACTATGAAATGAAAT 659

QY 712 GGGTACATGGCTATGACTACAGCCGCGCCAGTTGATTGAGATGTTGGAACATACCTTT 771

Db 660 GGGTACATGGCTATGACTACAGCCGCGCCAGTTGATTGAGATGTTGGAACATACCTTT 719

QY 772 GAAGACATTAAACCAATATATGAACATCTTCATGCTATGTCAGGGCAAAAGTTGATGAAT 831

Db 720 GAAGACATTAAACCAATATATGAACATCTTCATGCTATGTCAGGGCAAAAGTTGATGAAT 779

QY 832 GCCTATCTCTTCTATATGACTCAATGGATGCCCTCCCTGCTCATTTGCTTGGTGATATG 891

Db 780 GCCTATCTCTTCTATATGACTCAATGGATGCCCTCCCTGCTCATTTGCTTGGTGATATG 839

QY 892 TGGGTAGATTTTGGCAAAATCTGACTCTTTCAGACATTCCTTTGGACAGAAACCAAAAC 951

Db 840 TGGGTAGATTTTGGCAAAATCTGACTCTTTCAGACATTCCTTTGGACAGAAACCAAAAC 899

QY 952 ATAGATGTTACTGATGCAATGGTGGACACAGGCTGGGATGCACAGAGAAATATTCAGAG 1011

Db 900 ATAGATGTTACTGATGCAATGGTGGACACAGGCTGGGATGCACAGAGAAATATTCAGAG 959

QY 1012 GCGGAGAAGTCTTCTGATCTGTTGGTCTTCCCTAATATGACTCAAGGATTCCTGGGAAAT 1071

Db 960 GCGGAGAAGTCTTCTGATCTGTTGGTCTTCCCTAATATGACTCAAGGATTCCTGGGAAAT 1019

QY 1072 TCATGCTAACGGACACAGGAAATGTTCAAGAACAGTCTGCCATCCACAGCTTGGGAC 1131

Db 1020 TCATGCTAACGGACACAGGAAATGTTCAAGAACAGTCTGCCATCCACAGCTTGGGAC 1079

QY 1132 CTGGGAAGGGGACGCTTCAGAGTCCCTTATGTCACAAAGGTGCACAAATGAGCAGCTTCCTG 1191

Db 1080 CTGGGAAGGGGACGCTTCAGAGTCCCTTATGTCACAAAGGTGCACAAATGAGCAGCTTCCTG 1139

QY 1192 ACAGCTCATCATGAGATGGGACATATCCAGTATGATATGGCATATGCTGCACAAACCTTTT 1251

Db 1140 ACAGCTCATCATGAGATGGGACATATCCAGTATGATATGGCATATGCTGCACAAACCTTTT 1199

QY 1252 CTGCTAAGAAATGGAGCTAATGAAGGATTCATGAAGCTGTTGGGAAATCATGTCACTT 1311

Db 1200 CTGCTAAGAAATGGAGCTAATGAAGGATTCATGAAGCTGTTGGGAAATCATGTCACTT 1259

QY 1312 TCTGCAGCCACACCTAAGCATTTAAATTCATTGGTCTTCTGTCACCCGATTTTCAAGAA 1371

Db 1260 TCTGCAGCCACACCTAAGCATTTAAATTCATTGGTCTTCTGTCACCCGATTTTCAAGAA 1319

QY 1372 GACAATGAACAGAAATAAACTTCTCTCAACAAGCACTCAGATTGTTGGACCTCG 1431  
DB 1320 GACAATGAACAGAAATAAACTTCTCTCAACAAGCACTCAGATTGTTGGACCTCG 1379  
QY 1432 CCATTACTTACATGTTAGAGAGTGGAGTGGATGCTTTAAAGGGGAAATTCGCCAA 1491  
DB 1380 CCATTACTTACATGTTAGAGAGTGGAGTGGATGCTTTAAAGGGGAAATTCGCCAA 1439  
QY 1492 GACCAGTGGATCAAAAGTGGTGGAGATGAAGCGAGAGATAGTTGGGTGGTGAACCT 1551  
DB 1440 GACCAGTGGATCAAAAGTGGTGGAGATGAAGCGAGAGATAGTTGGGTGGTGAACCT 1499  
QY 1552 GTGCCOCCATGATGAACATACACTGTGACCCCGCATCTCTGTTCCATGTTTCTAATGATTAC 1611  
DB 1500 GTGCCOCCATGATGAACATACACTGTGACCCCGCATCTCTGTTCCATGTTTCTAATGATTAC 1559  
QY 1612 TCATTCTTCGATATACACAGGACCTTTACCAATTCAGTTCACAGAGCACTTGT 1671  
DB 1560 TCATTCTTCGATATACACAGGACCTTTACCAATTCAGTTCACAGAGCACTTGT 1619  
QY 1672 CAAGCAGCTTAACATGAAGGCCCTTGACAAATGTGACATCTCAAACTCTACAGAACT 1731  
DB 1620 CAAGCAGCTTAACATGAAGGCCCTTGACAAATGTGACATCTCAAACTCTACAGAACT 1679  
QY 1732 GGACAGAACTCTCAATATGCTGAGGCTTGAAAAATCAGAACTCGACCTAGCATTG 1791  
DB 1680 GGCAGAACTCTCAATATGCTGAGGCTTGAAAAATCAGAACTCGACCTAGCATTG 1739  
QY 1792 GAAATGTTGTAGGAGCAAAAGCAATGAATGTAAAGCCACTGCTCAACTACTTTGAGCCC 1851  
DB 1740 GAAATGTTGTAGGAGCAAAAGCAATGAATGTAAAGCCACTGCTCAACTACTTTGAGCCC 1799  
QY 1852 TTATTACTGCTGAAAGCAGACAGAAATCTTTTGGATGAGTACCGACTGG 1911  
DB 1800 TTATTACTGCTGAAAGCAGACAGAAATCTTTTGGATGAGTACCGACTGG 1859  
QY 1912 AGTCCATATGCAAGCAAAAGCAATCAAGTGAAGTAAAGCCATAAGCTTCTTTGGAGAT 1971  
DB 1860 AGTCCATATGCAAGCAAAAGCAATCAAGTGAAGTAAAGCCATAAGCTTCTTTGGAGAT 1919  
QY 1972 AAAGCATATGAATGAACAGCAATGAATGTACCTGTTCCGATCATCTGTTGCATATGCT 2031  
DB 1920 AAAGCATATGAATGAACAGCAATGAATGTACCTGTTCCGATCATCTGTTGCATATGCT 1979  
QY 2032 ATGAGCAGTACTTTTAAAGTAAATAATCAGATGATCTTTTGGGAGGAGGATGTG 2091  
DB 1980 ATGAGCAGTACTTTTAAAGTAAATAATCAGATGATCTTTTGGGAGGAGGATGTG 2039  
QY 2092 CGAGTGGCTAAATTTGAACCAAGATCTCCTTTAATTTCTTGTCTACCTGCACCTAAAAAT 2151  
DB 2040 CGAGTGGCTAAATTTGAACCAAGATCTCCTTTAATTTCTTGTCTACCTGCACCTAAAAAT 2099  
QY 2152 GTGCTCTGATATCATCTCCTAGAACTGAAGTGAAGGAGGATCAGGATGTCCTGGAGCCGT 2211  
DB 2100 GTGCTCTGATATCATCTCCTAGAACTGAAGTGAAGGAGGATCAGGATGTCCTGGAGCCGT 2159  
QY 2212 ATCAATGATGCTTCCGCTGTAATGACACAGCCCTAGAGTTCTTGGGGATACAGCCAAACA 2271  
DB 2160 ATCAATGATGCTTCCGCTGTAATGACACAGCCCTAGAGTTCTTGGGGATACAGCCAAACA 2219  
QY 2272 CTGGAGCTTCCAAACAGCCCTGTTCCATATGCTGATGTTTGGAGTTGTGATG 2331  
DB 2220 CTGGAGCTTCCAAACAGCCCTGTTCCATATGCTGATGTTTGGAGTTGTGATG 2279  
QY 2332 GGAGTGAATAGTGGTGGCATGTCATCTCTGATCTTCACTGGGATCAGAGATCGGAAGAAG 2391  
DB 2280 GGAGTGAATAGTGGTGGCATGTCATCTCTGATCTTCACTGGGATCAGAGATCGGAAGAAG 2339

RESULT 7  
AAS14890  
ID AAS14890 standard; cDNA; 2911 BP.

XX AAS14890;  
AC 20-DEC-2001 (first entry)  
DT Human cDNA encoding novel human protein NHP #11.  
DE Human; novel human protein; NHP; ss; antidiabetic; antirheumatic;  
KW antiarthritic; cytostatic; antiarteriosclerotic; vulnery;  
KW neuroprotective; nootropic; antiparkinsonian;  
KW anti-human immunodeficiency virus; antidiabetic; vasotropic; cardiant;  
KW hypotensive; anorectic; antinfertility; neuroleptic; anticonvulsant;  
KW antimalic; immunosuppressive; cerebroprotective; antimicrobial;  
KW antinflammatory; antibacterial; antipsoriatic; thyromimetic;  
KW immunomodulator; antiseborrheic; dermatological; vasoconstriction;  
KW gastrointestinal disorder; cardiovascular disorder; hypertension;  
KW coronary heart disease; arteriosclerosis; anorexia; obesity; bulimia;  
KW cachexia; male infertility; impotence; testicular cancer; lung tumour;  
KW hyperproliferative disorder; pulmonary system disorder;  
KW central nervous system disorder; bone disorder;  
KW neurodegenerative disease; Alzheimer's disease; Parkinson's disease;  
KW Huntington's disease; schizophrenia; mania; dementia; parancia;  
KW panic disorder; learning disability; amyotrophic lateral sclerosis;  
KW psychosis; autism; sleep disorder; immune system disorder;  
KW Hashimoto's thyroiditis; musculo-skeletal system disorders;  
KW multiple sclerosis; ischaemic brain injury; stroke; infectious disease;  
KW diabetes mellitus; immunological disorder; asthma; AIDS;  
KW acquired immunodeficient syndrome; leukaemia; rheumatoid arthritis;  
KW inflammatory bowel disease; sepsis; acne; psoriasis; lupus erythematosus;  
KW neural system disorder; respiratory disorder; olfactory disorder;  
KW wound healing.  
XX Homo sapiens.  
OS  
FH Key Location/Qualifiers  
CDS 213..998  
FT /\*tag= a  
FT /product= "NHP #11"  
FT  
FT  
FT  
PN WO200174896-A1.  
XX 11-OCT-2001.  
XX  
XX 02-APR-2001; 2001WO-US10542.  
XX 03-APR-2000; 2000US-194118P.  
XX 29-SEP-2000; 2000US-236384P.  
XX (HUMA-) HUMAN GENOME SCI INC.  
XX Moore PA, Ni J, Soppet DR, Coleman TA, Gentz RL, Endress GA;  
PI Li Y, Dillon PJ;  
XX P-PSDB; AAU09102.  
DR WPI: 2001-626394/72.  
DR P-PSDB; AAU09102.  
XX  
PT New human proteins, useful for diagnosing, treating, preventing and/or  
PT prognosing disorders related to the proteins, including cardiovascular  
PT disorders, autoimmune disorders and reproductive disorders -  
XX  
PS Claim 1; Page 297-298; 318pp; English.  
XX  
CC The invention relates to novel human proteins (NHP) and the  
CC nucleic acids that encode them and antibodies raised against them.  
CC The proteins, antibodies and nucleic acids are useful in the diagnosis,  
CC prognosis, prevention and/or treatment of diseases and/or disorders  
CC involving vasoconstriction, gastrointestinal disorders, cardiovascular  
CC disorders (e.g. hypertension, erectile dysfunction, high blood pressure,  
CC coronary heart disease and arteriosclerosis), anorexia, obesity, bulimia,  
CC cachexia, disorders of small intestine, disorders of reproductive system  
CC (e.g. male infertility and/or impotence), testicular cancer, lung tumours  
CC and other hyperproliferative disorders, disorders of pulmonary system,  
CC central nervous system disorders, bone disorders, neurodegenerative

CC diseases and behavioural disorders (e.g. Alzheimer's disease, Parkinson's disease, Huntington's disease, schizophrenia, mania, dementia, paranoia, panic disorder, learning disabilities, anyotropic lateral sclerosis, CC psychoses, autism, sleep disorders), immune system disorders (e.g. Hashimoto's thyroiditis), renal and musculo-skeletal system disorders, CC central nervous system disorders (e.g. multiple sclerosis, ischaemic brain injury and/or stroke), infectious diseases, diabetes mellitus, CC immunological disorders (e.g. asthma, acquired immunodeficient syndrome (AIDS), leukaemia, rheumatoid arthritis, inflammatory bowel disease, CC sepsis, acne, psoriasis and lupus erythematosus), neural system disorders, respiratory disorders, olfactory disorders and wound CC healing. The present sequence encodes an NHP of the invention.

xx Sequence 2911 BP; 896 A; 570 C; 655 G; 788 T; 2 other;

Query Match		57.0%;	Score 2275;	DB 22;	Length 2911;
Best Local Similarity		99.4%;	Pred. No. 0;		
Matches 2325;		Conservative 0;	Mismatches 11;	Indels 4;	Gaps 4;
Qy	53	GGGCGAGGTATCTGGCTCACAGGACGATGCAAGCTCTTCCTGGCTCCTTCTCAGCC	112		
Db	1	GTGGATGTGATCTTGGCTCCCGGGGAGGATGTC-AGCTCTTCTGGCTCTTCTCAGCC	59		
Qy	113	TTGTTGCTGTAACTGCTGCTAGTCCACCATTCAGGAACAGGCGCAAGACATTTTT-GGAC	171		
Db	60	TTGTTGCTGTAACTGCTGCTAGTCCACCATTCAGGAACAGGCGCAAGACATTTTTGGGAC	119		
Qy	172	AAGTTTAAACAGGAGCGGAGACCTGTTCTATCAAGTTCAGCTTCTTGGATTAT	231		
Db	120	AAGTTTAAACAGGAGCGGAGACCTGTTCTATCAAGTTCAGCTTCTTGGATTAT	179		
Qy	232	AACACCAATATTACTGAAGAGATGTCACAAACATGAATAAGTCGGGACAAATGGTCT	291		
Db	180	AACACCAATATTACTGAAGAGATGTCACAAACATGAATAAGTCGGGACAAATGGTCT	239		
Qy	292	GCTTTTAAAGAACAGTCCACACTGCGCAATATTCACATGAGCACCATTACAGATC	351		
Db	240	GCTTTTAAAGAACAGTCCACACTGCGCAATATTCACATGAGCACCATTACAGATC	299		
Qy	352	CTCAGCTCAAGCTTCAGCTGAGGCTCTTCAGCAAAATGGGTTTCAGTGTGTCAGAA	411		
Db	300	CTCAGCTCAAGCTTCAGCTGAGGCTCTTCAGCAAAATGGGTTTCAGTGTGTCAGAA	359		
Qy	412	CACAGAGCAACAGTGTGACAAATTTCAATACATGAGCACCATTACAGTACTGA	471		
Db	360	CACAGAGCAACAGTGTGACAAATTTCAATACATGAGCACCATTACAGTACTGA	419		
Qy	472	AAAGTTTGTAAACCCAGATATCCACAGAAATGCTTATTACTTGAACCCAGGTTGAATGAA	531		
Db	420	AAAGTTTGTAAACCCAGATATCCACAGAAATGCTTATTACTTGAACCCAGGTTGAATGAA	479		
Qy	532	ATAATGCAACAGTGTGAGTACATGAGAGGCTCTGGCTTGGGAGAGCTGGAGATCT	591		
Db	480	ATAATGCAACAGTGTGAGTACATGAGAGGCTCTGGCTTGGGAGAGCTGGAGATCT	539		
Qy	592	GAGTCTGGCAAGCAGCTGAGGCGCATTTATATGAAGAGTATGTGGTCTTGAATAATGAGATG	651		
Db	540	GAGTCTGGCAAGCAGCTGAGGCGCATTTATATGAAGAGTATGTGGTCTTGAATAATGAGATG	599		
Qy	652	GCAGAGCAATATTTATGAGGACTATGGGATTTATGGAGGAGACTATGAATTAAT	711		
Db	600	GCAGAGCAATATTTATGAGGACTATGGGATTTATGGAGGAGACTATGAATTAAT	659		
Qy	712	GGGTAGATGGCTATGACTACAGCGGCGGCGCTGATTGAAGATGTGGAACATACCTTT	771		
Db	660	GGGTAGATGGCTATGACTACAGCGGCGGCGCTGATTGAAGATGTGGAACATACCTTT	719		
Qy	772	GAGAGATTTAAACCATTTATGACATCTTCATGCTCTATGTGAGGCGCAAGTTGATGAAT	831		
Db	720	GAGAGATTTAAACCATTTATGACATCTTCATGCTCTATGTGAGGCGCAAGTTGATGAAT	779		
Qy	832	GCCTATCTCTTATATACAGTCCAAATTTGGATGCTGCCCTGCTCATTTGCTTGGTATATG	891		

Db	780	GCCTATCTCTTCTTATATACAGTCCAAATTTGGATGGCTCCCTGCTCATTTGCTTGGTATATG	839		
Qy	892	TGGGTTAGATTTTGGACAAATCTGTACTCTTTGACAGTTCCTTTTGGACAGAAACCAAC	951		
Db	840	TGGGTTAGATTTTGGACAAATCTGTACTCTTTGACAGTTCCTTTTGGACAGAAACCAAC	899		
Qy	952	ATACATCTTACTGATCAATGTTGGACAGGCTGGATGTCACAGAGATATTTCAAGGAG	1011		
Db	900	ATAGATCTTACTGATCAATGTTGGACAGGCTGGATGTCACAGAGATATTTCAAGGAG	959		
Qy	1012	GCCGAGAGTTCCTTTGATCTGTTGCTTCTTCTTAATATGACTCAAGGATTTCTGGGAAAT	1071		
Db	960	GCCGAGAGTTC-TTGATCTGTTGCTTCTTCTTAATATGACTCAAGGATTTCTGGGAAAT	1018		
Qy	1072	TCCATGCTAACGGACCCAGGAAATGTTCAGAAAGCATGTCGCATCCACAGCTTGGGAC	1131		
Db	1019	TCCATGCTAACGGACCCAGGAAATGTTCAGAAAGCATGTCGCATCCACAGCTTGGGAC	1078		
Qy	1132	CTGGGAGAGGCGGACTTCAGGATCCTTATGTGCACAAAGGTGACATGGACGACTTCTCTG	1191		
Db	1079	CTGGGAGAGGCGGACTTTCAGGATCCTTATGTGCACAAAGGTGACATGGACGACTTCTCTG	1138		
Qy	1192	ACAGCTCATCATGAGATGGGGCATATCCAGTATGATATGGCATATGCTGCACAACTTTT	1251		
Db	1139	ACAGCTCATCATGAGATGGGGCATATCCAGTATGATATGGCATATGCTGCACAACTTTT	1198		
Qy	1252	CTGCTAAGAAATGAGCTAATGAAGATTCCATGAAGCTGTTGGGAAATCATGTCACAT	1311		
Db	1199	CTGCTAAGAAATGAGCTAATGAAGATTCCATGAAGCTGTTGGGAAATCATGTCACAT	1258		
Qy	1312	TCCTCAGCCACACTAAGCATTTAAATCCATTTGCTTCTGTCAACCCGATTTTCAAGAA	1371		
Db	1259	TCCTCAGCCACACTAAGCATTTAAATCCATTTGCTTCTGTCAACCCGATTTTCAAGAA	1318		
Qy	1372	GACAAATCAACAGAAATATAACTTCTGCTCAAAACAGCACTCACGATTTGTTGGGACTCTG	1431		
Db	1319	GACAAATCAACAGAAATATAACTTCTGCTCAAAACAGCACTCACGATTTGTTGGGACTCTG	1378		
Qy	1432	CCATTTACTTACATGTTAGAGAGTGGAGTGGATGGTCTTTAAAGGGGAAATTTCCCAA	1491		
Db	1379	CCATTTACTTACATGTTAGAGAGTGGAGTGGATGGTCTTTAAAGGGGAAATTTCCCAA	1438		
Qy	1492	GACCAAGTGGATGAAGAAAGTGGTGGGAGATGAAGCGAGAGATAGTTGGGTGGTGAACCT	1551		
Db	1439	GACCAAGTGGATGAAGAAAGTGGTGGGAGATGAAGCGAGAGATAGTTGGGTGGTGAACCT	1498		
Qy	1552	GTGCCCCATGATGAACATATCTGTGACCCCGCATCTCTGTTCCATGTTTCTTAATGATTAC	1611		
Db	1499	GTGCCCCATGATGAACATATCTGTGACCCCGCATCTCTGTTCCATGTTTCTTAATGATTAC	1558		
Qy	1612	TCATTTACTTCAATTTACACAAAGGACCTTTTACCAATTTCCAGTTTCAAGAGCACTTTGT	1671		
Db	1559	TCATTTACTTCAATTTACACAAAGGACCTTTTACCAATTTCCAGTTTCAAGAGCACTTTGT	1618		
Qy	1672	CAAGCAGCTAAACATGAAGCCCTCTGACAAATGTGACATCTCAAACTCTACAGAGCT	1731		
Db	1619	CAAGCAGCTAAACATGAAGCCCTCTGACAAATGTGACATCTCAAACTCTACAGAGCT	1677		
Qy	1732	GGACAGAACTGTTCAATATGCTGAGGCTTGGAAATCAGAACCTTGGACCTTAGCATG	1791		
Db	1678	GGACAGAACTGTTCAATATGCTGAGGCTTGGAAATCAGAACCTTGGACCTTAGCATG	1737		
Qy	1792	GAAATTTGTTAGGAGCAAAACATGAATGTAAAGGCCACTGCTCAACTTCTTTGAGGCC	1851		
Db	1738	GAAATTTGTTAGGAGCAAAACATGAATGTAAAGGCCACTGCTCAACTTCTTTGAGGCC	1797		
Qy	1852	TTATTTACCTGGCTGAAGACCAAGCAAGATTTCTTTTGTGGATGGAGTACCCGACTGG	1911		
Db	1798	TTATTTACCTGGCTGAAGACCAAGCAAGATTTCTTTTGTGGATGGAGTACCCGACTGG	1857		
Qy	1912	AGTCCATATGACAGCAACCAAGCATCAAGTGAGGATAAGGCTTAAATTCAGCTCTTGGAGAT	1971		
Db	1858	AGTCCATATGACAGCAACCAAGCATCAAGTGAGGATAAGGCTTAAATTCAGCTCTTGGAGAT	1917		

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QY 1972 AAAGCATATGAATGAACGACAAATGAAATGTACCTGTTCCGATCATCTGTTGCATATGCT 2031
D 1918 AAAGCATATGAATGAACGACAAATGAAATGTACCTGTTCCGATCATCTGTTGCATATGCT 1977
QY 2032 ATGAGGAGTACTTTTAAAAAGTAAAAATCAGATGATCTTTTGGGGAGGAGGATGTG 2091
D 1978 ATGAGGAGTACTTTTAAAAAGTAAAAATCAGATGATCTTTTGGGGAGGAGGATGTG 2037
QY 2092 CGAGTGGCTAATTTGAAACCAAGATCTCCCTTAATTTCTTTGTCACCTGCACCTAAAAAT 2151
D 2038 CGAGTGGCTAATTTGAAACCAAGATCTCCCTTAATTTCTTTGTCACCTGCACCTAAAAAT 2097
QY 2152 GTGCTGTATATCAATCTCTAGAACTGAAGTTGAAAAGGCCATCAGGATGTCCCGAGCGGT 2211
D 2098 GTGCTGTATATCAATCTCTAGAACTGAAGTTGAAAAGGCCATCAGGATGTCCCGAGCGGT 2157
QY 2212 ATCAATGATGCTTTCCGCTCTGAATGACACACGCTAGAGTTCTTGGGGATACAGCCAAACA 2271
D 2158 ATCAATGATGCTTTCCGCTCTGAATGACACACGCTAGAGTTCTTGGGGATACAGCCAAACA 2217
QY 2272 CTGGACCTCTTAACACGAGCCCTGTTTCCATATGCTGATGTTGTTTGGAGTTGTGATG 2331
D 2218 CTGGACCTCTTAACACGAGCCCTGTTTCCATATGCTGATGTTGTTTGGAGTTGTGATG 2277
QY 2332 GGAGTGATAGTGGTGGCATGTGATCTCTGATCTCTACTGGGATCAGAGATCGGAAGAAG 2391
D 2278 GGAGTGATAGTGGTGGCATGTGATCTCTGATCTCTACTGGGATCAGAGATCGGAAGAAG 2337

RESULT 8
AAS42515
ID AAS42515 standard; cDNA; 3474 BP.
XX
AC AAS42515;
XX
DT 18-DEC-2001 (first entry)
XX
DE Human cDNA encoding an mdt protein, clone Lf:347572.1:2000MAY01.
XX
KW Human; molecules for disease detection and treatment; mdt; ss;
KW Antiarteriosclerotic; hepatotropic; antiproliferative; cytostatic;
KW immunosuppressive; antidiabetic; antidiabetic; antiproliferative;
KW osteopathic; antidiabetic; antiproliferative; cell proliferative disorder;
KW arteriosclerosis; cirrhosis; psoriasis; cancer; adenocarcinoma;
KW leukemia; breast cancer; autoimmune disorder; AIDS;
KW acquired immunodeficiency syndrome; Addison's disease;
KW diabetes mellitus; asthma; multiple sclerosis; osteoarthritis.
XX
OS Homo sapiens.
XX
PN WO200162922-A2.
XX
PD 30-AUG-2001.
XX
PF 21-FEB-2001; 2001WO-US05896.
XX
PR 24-FEB-2000; 2000US-0185213.
PR 16-MAY-2000; 2000US-0205232.
PR 17-MAY-2000; 2000US-0205285.
PR 17-MAY-2000; 2000US-0205286.
PR 17-MAY-2000; 2000US-0205287.
PR 17-MAY-2000; 2000US-0205287.
PR 17-MAY-2000; 2000US-0205323.
PR 17-MAY-2000; 2000US-0205324.
XX
( INCY- ) INCYTE GENOMICS INC.
XX
PI Panzer SR, Spiro PA, Banville SC, Shah P, Chalup MS, Chang SC;
PI Chen A, D'Sa SA, Anshay S, Dahl CR, Dam TC, Daniels SE;
PI Dufour GE, Flores V, Fong WT, Greenwalt LB, Hillman JL, Jones AL;
PI Liu TF, Roseberry AM, Rosen BH, Russo FD, Stockdreher TK, Daffo A;
PI Wright RJ, Yap PE, Yu JY, Bradley DL, Bratcher SR, Chen W;
PI Cohen HJ, Hodgson DM, Lincoln SE, Jackson S;
```

XX

DR WPI: 2001-570631/64.  
P-PSDB; AAU25463.

XX

PT New disease detection and treatment molecule polynucleotides and  
polypeptides, useful for diagnosis and treatment of arteriosclerosis,  
PT cirrhosis, psoriasis, cancer, autoimmune disorders, diabetes mellitus,  
PT asthma and multiple sclerosis -

XX

PS Claim 1; Page 139-140; 183pp; English.

XX

CC The invention relates to novel human molecules for disease  
detection and treatment (mdt proteins) and the polynucleotides encoding  
them. The MDT polynucleotides and polypeptides are useful for diagnostic  
CC and therapeutic purposes e.g. to diagnose and treat cell proliferative  
disorders (e.g. arteriosclerosis, cirrhosis and psoriasis) cancers (e.g.  
CC adenocarcinoma, leukemia and breast cancer) autoimmune disorders  
(e.g. acquired immunodeficiency syndrome (AIDS) and Addison's disease)  
CC diabetes mellitus, asthma, multiple sclerosis, osteoarthritis, and many  
CC more diseases given in the specification. The present sequence  
CC encodes an mdt protein of the invention.

XX

SQ Sequence 3474 BP; 1019 A; 696 C; 781 G; 978 T; 0 other;

Query Match

Best Local Similarity 60.8%; Score 2065.2; DB 22; Length 3474;

Matches 3053; Conservative 0; Mismatches 253; Indels 146; Gaps 69;

QY

66 TGGCTCACAGGGGACGATGTCAGCT-CTTCTGGCTCCCTTCTCAGCCCTTGTGCTGTA 124

Db

23 TGGCTCACAGGGGACGATGTCAGCTCCCTTCTCAGCCCTTGTGCTGTA 82

QY

125 CT--GGTGTCTAGTCACCATGAGGACAGCCAGACATTTTGGACAAGTTTAAACA 182

Db

83 ACTGGCTGCTCAGTCCACCATTTGAGGACAGCCAGACATTTTGGACAAGTTTAAACA 142

QY

183 CGAAGCCGAAGACCTGTTCTATCAAAAGTTTCAC--TTGCTTCTTGGAAATTAACACCAAT 240

Db

143 CGAAGCCGAAGACCTGTTCTATCAAAAGTTTCAC--TTGCTTCTTGGAAATTAACACCAAT 202

QY

241 ATTACTGAAGAGAATGTCCAA--AACATGAATATGCTGGGACAAATGTGCTG 292

Db

203 ATTACTGAAGAGAATGTCCAAACATGCAATAAGTTGCTGGCAGACAAATGTGCTG 262

QY

293 --CCCTTTTAAAGGACAGTCCACACTTCCCAA--ATGATCCACTACAAGAAA----- 343

Db

263 CCCTTTTAAAGGACAGTCCACACTTCCCAAAGATGTATCCACTACAAGCAAACTTCA 322

QY

344 -TTCAGAAATCTCAGATCAAGCTTCAGCTGTCAGGC-----TCTTCAGCAAAATG 391

Db

323 CGACATCTCCACATGTCAACGCTTCAGCTGTCAGGCCTTCTTCAAGCATAAAATGTG 382

QY

392 GGTCTTTCAGTGTGTC-----AGAAGACAGAGCAACGGTTGAACACAAATTTCAAT 444

Db

383 AGTCTTCAGGTTGGTTCATCAGAGACAGAGCAACACCGGTTGAACACAAATTTCTAAT 442

QY

445 ACAATGA-----GCACCATCTACAGTACTGAAAAAGTTTGAACCCAGATAATCCA 495

Db

443 ATACAAATGGAGCCACCAATCCTAACAGTAACCTGGAACACCGTGAACCCAGATAATCCA 502

QY

496 CAAGAATGCTTATTACTTGAACCCAGGTTTGAATGAATAATGGCAACAGTTTAGACTAC 555

Db

503 CAAGAATGCTTATTACTTGAACCCAGGTTTGAATGAATAATGGCAACAGTTTAGACTAC 562

QY

556 AATGAGAGCTCTGGGCTTGGAAAGCTGGAGATCTGAGTGGCGCAAGCAGCTGAGGCCA 615

Db

563 AATGAGAGCTCTGGGCTTGGAAAGCTGGAGATCTGAGTGGCGCAAGCAGCTGAGGCCA 622

QY

616 TTATATGAAGAGTATGCTCTTGAATAATGAGATGCAAGAGCAATATCATATGAGGAC 675

Db

623 TTATATGAAGAGTATGCTCTTGAATAATGAGATGCAAGAGCAATATCATATGAGGAC 682

QY

676 T--ATGGGGATTATTGGAGAGGAGACTATGAAGTAAATGGGGTAGA---TGGCTATGACT 730









associated with inflammation such as arthritis and enterocolitis -

Claim 10; Page 104-109; 125pp; English.

The invention relates to the metalloenzyme Zace2. Zace2, an angiotensin-converting enzyme is a zinc metalloprotease that plays roles in blood pressure regulation and fertility. Zace2 can be expressed by standard recombinant methodology. Zace2 polypeptides are useful for treating inflammatory bowel disease (e.g. Crohn's disease and ulcerative colitis), as targets for identifying modulators of zinc protease activity, for screening or identifying new angiotensin-converting enzyme (ACE) inhibitors, and as a basis for rational drug design for inhibitory molecules. The nucleic acids can be used to detect the expression of a zace2 gene in a biological sample, as probes for in vivo diagnosis and for detecting and localizing Zace2 gene expression in tissue samples, to determine whether a subject's chromosomes contain a mutation in the Zace2 gene, and to detect aberrations associated with the Zace2 locus. Inhibitors of ACE are used for treating hypertension of various conditions, including left ventricular systolic dysfunction, progressive renal impairment, scleroderma renal crisis, congestive heart failure due to dysfunction, and treatment of atherosclerosis. Zace2 agonists may be used to treat infertility while Zace2 antagonists are used for inducing infertility. The present sequence represents a cDNA encoding the mouse Zace2-5 protein.

Sequence 2638 BP; 802 A; 556 C; 611 G; 669 T; 0 other:

Query Match 55.6%; Score 1888.6; DB 22; Length 2638;  
Best Local Similarity 84.1%; Pred. No. 0;  
Matches 2161; Conservative 0; Mismatches 394; Indels 16; Gaps

QY 51 CGGGGCGAGTATCTGGCTCAGGGGACGATGTCAAGCTCTTCCTGCCTCCTTCTCAG 110  
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 75 CAGTGGAATGGATCTTGGCCGACGGGAAGAAGTGCAGCTCCTCTCGCTCCTTCTCAG 134  
  
QY 111 CCTGTGTGCTAACTGCTCAGTCCACCATTTGAGGAACAGGCCAAGACATTMTTGA 170  
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 135 CCTTGTGCTGTACTACTGCTCAGTCCCTCACGAGGAAAATGCCAAGACATTTTTAA 194  
  
QY 171 CAAGTTTAACACGAGCGAACACCTGTCTATCAAAGTTCACCTTGTCTTGGAAATTA 230  
Db | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 195 CAACTTTAAACGAGCTGAAGACCTGTCTATCAAAGTTCACCTTGTCTTGGAAATTA 254  
  
QY 231 TAACACCAATATTACTGAAGAGAAATGTCCAACAATGAATAATPGCTGGGGACAAATPGTFC 290  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 255 TAATACTTAACATTTACTGAAGAAATGCCAAAAGATGAGTAGGCTGCGAGCCAAATGGTFC 314  
  
QY 291 TGCCTTTTAAAGGAACAGTCCACACTTGCCCCAAATGTATCCACTACAAAGAAATTCAGAA 350  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 315 TGCTTTTATGAACACAGTCTAAGACTGCCAAAGTTTCTCACTACAAGAAATCCAGAC 374  
  
QY 351 TCACACAGTCAAGCTTCAGCTGAGGCTCTTACAGAAAATGGGTCTTACGTGCTGTGACA 410  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 375 TCCGATCATCAAGCGTCAACTACAGGCCCTTCAGAAAGTGGGTCTCAGCACTCTCAGC 434  
  
QY 411 AGACAAGACCAACGGTTGAACACAATCTTAATACAAATGAGCACCATCTACAGTACTGG 470  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 435 AGACAAGACCAACAGTTGAACACAATCTGAACACCATGAGCACCATTTACAGTACTGG 494  
  
QY 471 AAAAGTTTGAACCCAGATTAATCCACAGAATCCTTATTCTTGAACACAGGTTTGAATGA 530  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 495 AAAAGTTTGAACCCAAAGAACCCCAAGAATCCTTATTCTTGAACCCAGGATTTGGATGA 554  
  
QY 531 AATAATGGCAAAAGTTTAGACTACAAATGAGAGGCTCTGGGCTTGGGAAGCTGGAGATC 590  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 555 AATAATGGCGCAGACACAGACTACAACTCTAGGCTCTGGCATGGAGGGCTGGAGGC 614  
  
QY 591 TGAGTTCGGCAGACGCTGAGGCCATTAATGAAGAGTATGTGGTCTTGAAAAATGAGAT 650  
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  
DB 615 TGAGTTCGGCAACGCTGAGGCCGTGTATGAAGAGTATGTGGTACTGAAAAACAGAT 674  
  
QY 651 GCCAAGAGCAAAATCATTTATGAGGACTATGGGATTTATTGGAGAGGAGACTATGCAAGTAA 710



Db 255 TAATACTACATTACTGAAGAAAATGCCAAAAGATGAGTGAGGCTGCAGCCAAATGGTC 314  
QY 291 TGCCTTTTAAAGGAACAGTCCACACTTGGCCCAAAATGATCCACTACAAGAAATTCAGAA 350  
Db 315 TGCCTTTTATGAAGAACAGTCTAGACGTGCCCAAAAGTTTCTCACTACAAGAAATCCAGAC 374  
QY 351 TCTCAGTCAAGCTTCAGCTGCAGGCTCTTCAGCAAAATGGGTCTTCAGTGTGTGAGA 410  
Db 375 TCCGATCATCAAGCTCAACTACAGGCCCTTCAGCAAAAGTGGGTCTTCAGCACTCTCAGC 434  
QY 411 AGCAGAGCAACAGCTTGAACACAAATCTAAATACATGAGCAGCCTTACAGTACTGG 470  
Db 435 AGCAGAGCAACAAAGTGTGAACAAATCTGAACACCATGAGCACCATTATACAGTACTGG 494  
QY 471 AAAAGTTTGAACCCAGATATCCACAAAGATGCTTTATTACTTGAACCCAGGTGTGAATGA 530  
Db 495 AAAAGTTTGAACCCAGCAAGCAAGCAAGATGCTTTATTACTTGAGCCAGGATTTGGATGA 554  
QY 531 AATAATGGCAACAGTATTAGACTACAATGAGAGGCTCTGGGCTTGGGAAAGCTGGAGATC 590  
Db 555 AATAATGGGCAAGCAGAGCTACAACTCTAGGCTCTGGGCAATGGGAGGCTGGAGGC 614  
QY 591 TGAGTTCGCAAGCAGCTGAGGCCATTATATGAAGAGTATGTGGTCTTGAAGAAATGAGAT 650  
Db 615 TGAGTTCGCAAGCAGCTGAGGCCCTTCTATGAAGAGTATGTGCTCTGAAAGAAAGAGAT 674  
QY 651 GCAAGAGCAATCATTTAGGAGCTATGGGATTTATGGAGAGGAGACTATGAAGTAAA 710  
Db 675 GCAAGAGCAACAAATTAAGAGCTATGGGATTTATGGAGAGGAGACTATGAAGCAGA 734  
QY 711 TGGGTAGATGGCTATGACTACAGCGCGGCGAGTTGATTTGAAGATGTGGAACATACCTT 770  
Db 735 GGGAGCAGATGCTACAACTATAACCGTAACAGTTGATTGAAGATGTAGAACGTACCTT 794  
QY 771 TGAAGAGATTAACCATTAATATGAACATCTTCAGCTCTATGAGGCGAAAGTTGATGAA 830  
Db 795 CCGAGAGATCAAGCCATTGTATGAGCATCTTCATGCTCTATGAGGAGAAAGTTGATGGA 854  
QY 831 TGCTATCCCTTCTATATCAGTCCAAATGGATGCTCCCTGCTCATTTGCTTGGTGATAT 890  
Db 855 TACCTACCTTCTATACATCAGCCCACTGGATGCTCCCTGCCCATTTGCTTGGTGATAT 914  
QY 891 GTGGGTAGATTTTGGCAAAATCTCTACTCTTTGACAGTTCCTTTTGGCAGAAACCAAA 950  
Db 915 GTGGGTAGATTTTGGCAAAATCTTACCTTTGACTTTCCTTTTGCACAGAAACCAAA 974  
QY 951 CATAGATGTTACTGATGCAATGGTGACAGGCTGGATGCACAGAGAAATATCAAGGA 1010  
Db 975 CATAGATGTTACTGATGCAATGATGAATCAGGCTGGGATGCAGAAAGGATATTTCAAGA 1034  
QY 1011 GGCGGAGAAAGTCTTTGATCTGTTGGTCTTCCTTAATATGACTCAAGGATTTCTGGGAAA 1070  
Db 1035 GGCAGAGAAATTTCTTTGTTTCTTGTGGCTTCCTCATATGACTCAAGGATTTCTGGGAAA 1094  
QY 1071 TTTCCATGCTAACGACCCAGGAAATGTTCAAGAAAGCTCTGCCATCCACAGCTTGGGA 1130  
Db 1095 CTCATGCTGACTGACCCAGAGATGGCGGAAAGTGTCTGCCCACCCACAGCTTGGGA 1154  
QY 1131 CTTGGGAAAGGCGACTTCCAGATCCTTATGTGCAACAAAGTGTGACATGGACAGCTTCCCT 1190  
Db 1155 TCTGGGACACGGAGACTTCAGAAATCAAGATGTGTACAAAGGTCAATGGACAACTCTCT 1214  
QY 1191 GACAGCTCATGATGAGATGGGCAATCCAGTATGATATGATATGCTGCGCAACCTTT 1250  
Db 1215 GACAGCCCATCAGAGATGGGACATCCAAATATGACATGATATGCCAGGCAACCTTT 1274  
QY 1251 TCTGCTAAGAAATGGAGCTAATGAAGGATTCATGAAGCTGTGGGAAATCATGTCACT 1310  
Db 1275 CTTGCTAAGAAAGGAGCCAAATGAAGGTTCATGAAGCTGTGGAGAAATCATGTCACT 1334  
QY 1311 TTCTGAGCCACACCTAAGCATTTAAATCCATTTGGTCTTCTGTCACCCGATTTTCAAGA 1370  
Db 1335 TTCTGAGCTACCCCAAGCATCTGAAATCCATTTGGTCTTCTGCTATCCGATTTTCAAGA 1394

QY 1371 AGACATGAACACAGAAATAAACTTCTGCTCAAAACAGCACTCACGATTTGTTGGACTCT 1430  
Db 1395 AGATAGCGAAACAGAGATAAACTTCTACTGAACAGGCATTGACAATTTGTTGGNACTCT 1454  
QY 1431 GCATTTACTTACATGTTTAGAAGTGGAGGTGATGCTTTTAAAGGGGAAATTTCCCAA 1490  
Db 1455 ACCGTTTACTTACATGTTTAGAAGTGGAGGTGATGCTTTTCCGGGTGAATTTCCCAA 1514  
QY 1491 AGACCACTGATGAATAAACTGTTGGAGATGAAGCGAGAGATAGTTGGGTGGTGGAACT 1550  
Db 1515 AGACAGTGGATGAATAAGTGGTGGAGATGAAGCGGAGATCGTTGGTGGTGGAGCC 1574  
QY 1551 TGTGCCCCATGATGAACATACCTGTGACCCCGCATCTCTGTGTCCATGTTTCTAATGATTA 1610  
Db 1575 TCTGCTCTGATGAACATACCTGTGACCCCTGCATCTCTGTGTCCATGTTTCTAATGATTA 1634  
QY 1611 CTCACTCATTCATATTTACACAGGACCTTTACCAATTCAGTTTCCAGTTTCAAGAGCACTTTG 1670  
Db 1635 CTCACTCATTCATATTTACACAGGACCTTTTACCANTTCCAGTTTCAAGAGCTCTTTG 1694  
QY 1671 TCAAGCAGCTAAACATGAAGGCCCTCTGSCACAAATGTGACATCTCAAACTCTACAGAAC 1730  
Db 1695 TCAAGCAGCTAAAGTATAATGGTTCTCTGSCACAAATGTGACATCTCAAACTCTACAGAAC 1754  
QY 1731 TGGACAGAACTGTTCAATATGCTGAGGCTTGGAAATCAGNAACCTGGACCCCTAGCAAT 1790  
Db 1755 TGGGCAAGATTTGCTCAAGATGCTGAGTCTTGGAAATTCAGAGCCCTGGACCGAGCCCT 1814  
QY 1791 GGAATATGTTTGAAGGACAAAGCAATGAATTAAGGCCACTGCTCAACTACTTTTGAACC 1850  
Db 1815 GGAATATGTTTGAAGGACAAAGCAATGAATTAAGTGAAGTAAAGCTTAACTTCTTGAAGC 1874  
QY 1851 CTATTTTACTGCTGGAAGACCAAGCAAGAAATTTCTTTTGGGATGGAGTACGCACTG 1910  
Db 1875 GTTGTGTGACTGGCTGAAAGAGCAAGCAAGAAATTTCTTTTGGGGTGGAACACTGAATG 1934  
QY 1911 GAGTCCATATGACAGCAACCAAGCAATCAAGTGAAGTAAAGCTTAAATCAGCTCTTGGAGA 1970  
Db 1935 GAGCCATATGCGGACCAAGCAATTAAGTGAAGTAAAGCTTAAATCAGCTCTTGGAGC 1994  
QY 1971 TAAAGCATATGAATGGAAGCAAGCAATGAATGATACCTGTTCCGATCATCTGTTGCATGTC 2030  
Db 1995 TATGCTATGAATGGAAGCAAGCAAGAAATTTCTGTTCCGATCATCTGTTGCATATGTC 2054  
QY 2031 TATGAGGCTGACTCTTTTAAAAGTAAATAATCAGATGATTTCTTTTGGGAGGAGGATGT 2090  
Db 2055 CATGAGAAAGTATTTCTCAATATCAAAACCCAGACAGTTCCTTTCTAGAGGAAGATGT 2114  
QY 2091 GCGAGTGGCTAATTTGAAACCAAGAAATCTCCTTTAATTTTCTGCTACTGCACTTAAAAA 2150  
Db 2115 ACCAGTGAATGATTTGAAACCAAGAGTCTCCTTCTACTTTTGTCTCACTCACCCCAAAA 2174  
QY 2151 TGTGCTCTGATATCATTTCTTAGAACTGAAGTTGAAAAGGCCATCAGGATGTCCCGGAGCGC 2210  
Db 2175 TGTGCTGATGATCATTTCTTAGAAGTGAAGTTGAAGATGCCATCAGATGCTCTCGGGCGC 2234  
QY 2211 TATCAATGATGCTTTCCGCTCTGAATGACAAACAGCTTAGAGTTTCTGGGATACAGCCAAAC 2270  
Db 2235 CATCAATGATGCTTTTGGCTGAATGAATAACAGCTTGGAGTTTCTGGGATTCACCCAAAC 2294  
QY 2271 ACTTGGACCTCTTAACAGCCCTGTTTCCATATGGCTGATTTGTTGGATTTGCTGAT 2330  
Db 2295 ACTTGGACCACTTACCAGCTCTCTGTACCATATGGCTGATATTTTGGTGTGCTGAT 2354  
QY 2331 GGGAGTGAATGCTTGGCTTGTCTATCCTGATCTTCACTGGGATCAGAGATCGGAAGAA 2390  
Db 2355 GGCACGTGAGTGTGGCATCATCTGATTTGCTACTGGGATCAAGGTTCGAAGAA 2414  
QY 2391 GAAAAATAAGCAAGCAAGTGGAGAAAATCTTTATGCCCTCCATCGATATTACCAAGGAGA 2450  
Db 2415 GAAAAATGAACAAAAAGAGAGAAACCTTTATGACTCGATGGACATTTGGAAAAAGGAGA 2474





Db 961 CCNAAATGACNCARGNTTGTGGARAAWWSNATGYTNACNGAYCNGGNAAYGNCAR 1020  
QY 1102 AAAGCAGTCTGCCATCCACAGCTTGGCAGCTGGGAGGCGACTTCAGGATCCCTTATG 1161  
Db 1021 AARGCNGTGTGAYCCNACNGCTGGGAYYTNNGNAAARGNGAYTMYMGNATHYTNATG 1080  
QY 1162 TGCACAAAGGTGACAATGGAGCTCTCTGACAGCTCATGATGAGTGGGCGCATATCCAG 1221  
Db 1081 TGYACNAAARGTNACNATGAYTYYTNACNGCNCAYCAYGARATGGGNCAYATHCAR 1140  
QY 1222 TATGATATGGCATATGCTGCACACCTTTCTGCTAGAAATGAGAGTAAAGGATTC 1281  
Db 1141 TAYGATATGGONTAYGCGNCNCARCTTYYTNTNMGNAAAYGCGNGAYGARGGNTT 1200  
QY 1282 CATGAAGCTGTGGGAAATCATGTCTACCTTCTGCAGCCACACATAAGCATTTAAATATCC 1341  
Db 1201 CAYGARGCNGTNGNGARATHATGWSNYTNWSNGCNCACCCNAARCAAYTNAARWSN 1260  
QY 1342 ATTGCTCTGTGCTACCGATTTTCAAGAAGACAATGAACAGAAATAAACTCTCTGCTC 1401  
Db 1261 ATHGNGTNTYTNWSNCCNGAYTTCARGARGAYAAAGARACNGARATHAAYTYYTNTYN 1320  
QY 1402 AAACAAGCACTCACGATTTGGGAGCTGTGCCATTTACTTACATGTTAGAGAAGTGGAGG 1461  
Db 1321 AARCAAGCNYTNACNATHGTNGGNACNTTCCNTTACNTATATGTYNGARARTGGMN 1380  
QY 1462 TGGATGTCTTTAAAGGGAATTTCCCAAGACAGCTGGATGGAATAAGTGGTGGAGATG 1521  
Db 1381 TGGATGTCTTTAAAGGGAATTTCCCAAGACAGCTGGATGGAATAAGTGGTGGAGATG 1440  
QY 1522 AAGCAGAGATAGTGTGGGCTGTGGAGCTGTGCCATGATGAACATCTGTGACCCC 1581  
Db 1441 AARMNGARATHGTNGNGTNGTNGARCCNTNCNCAYGARGACNTATYGVGAYCCN 1500  
QY 1582 GCATCTCTGTTCCATGTTCTTAATGATTTACTTCTATTCATTCGATATACAAAGACCCCT 1641  
Db 1501 GCNWSNYTNTYTCATGTTWSNAAAYGAYTAYWSNTTYATHMGNTATYATACNMGNACNTN 1560  
QY 1642 TACCAATTCAGTTTCAAGAAGCACTTGTCAAGCAGCTAAACATGAAGCCCTCTGCAC 1701  
Db 1561 TAYCARTHYCATTYCARGCCTTGTGARGCNGTNTGYCARGCNGCNAARCAYGARGCNCNTYCA 1620  
QY 1702 AAATGTGACATCTCAAACTCTACAGAGCTGGACAGAACTGTTCATATGCTGAGGCTT 1761  
Db 1621 AARTGTGATATWSNAAAYWSNACNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNG 1680  
QY 1762 GGAATATCAGAACCTCGACCTAGCATTTGGAATGTTGTAGAGCAGCAACATCAAT 1821  
Db 1681 GGNARWSNGARCCNTGACNTTNGCNTNGARATGTTNGGNGCNGCNGCNGCNGCNGCNG 1740  
QY 1822 GTAAGGCCACTGCTCAACTACTTTGAGCCCTTATTTACTGGCTGAAAGACCAAGAACAG 1881  
Db 1741 GTNMGNCNTNTYNTAAATYATVTTYGARCCNTNTYACNTGGYTNAARGAYCARAAVAAR 1800  
QY 1882 AATCTCTTTGTGGATGGATGAGTACCAGTGGAGTCCATATGAGACCAACCATCAAGTG 1941  
Db 1801 AAYWSNTTGTNGGNTGNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNG 1860  
QY 1942 AGGATAAGCCTAAAATCAGCTCTTGGAGATAAAGCATATGAATGGAACGACATGAATG 2001  
Db 1861 MGNATHWSNYTNARWSNCGNTNGNGAYAAARGCNTAYGARTGGAAYGAYAAAGATG 1920  
QY 2002 TACCTGTTCGGATCATCTGTGCATATGCTATGAGGAGTACTTTTAAAGTAAAAAAT 2061  
Db 1921 TAYTNTTMTGWSNWSNNGTNGCNTAYGCMATGCMGNCARTATYTTTNAARGTNAARAA 1980  
QY 2062 CAGATGATCTTTTGGGAGGAGGATGTGCGAGTGGCTTAATTTGAACCAAGAAATCTCC 2121  
Db 1981 CARATGATHTYTTTGGCARGARGAYGTNMGNTGNGCNGCNGCNGCNGCNGCNGCNGCNG 2040  
QY 2122 TTAATATCTTTGTGCTACGACCTTAAATGATGCTGATATCATCTCTGAGAACGATG 2181

Db 2041 TTYAAATTTTGTGTNACNGCNCNAAARAAAYGTNWSNGAYATHATHCCNMGNACNGARGTN 2100  
QY 2182 GAAAGGCGCATCAGGATCTCCGGAGCGGTATCAATGATGCTTCCGCTCTGAATGACAAC 2241  
Db 2101 GARAAGCNGTHMGNTATWSNMGNSNMGNTATHAAYGAYGCTTMMNYTNAAYGAYAA 2160  
QY 2242 AGCCTAGAGTTTCTGGGGATACAGCAACACTTGGACCTCTCTAACAGCCCCCTGTTTCC 2301  
Db 2161 WSNYTNAGARTTYYTNGNATHCARCCNACNTYTNNGCNCNCCNAAAYCARCCNCCNGTWSN 2220  
QY 2302 ATATGGCTGATGTTTGGAGTGTGATGGAGTGTGATGGTGTGATGGTGTGATGGTGTG 2361  
Db 2221 ATHTGGTNTATHTGTTTGGNGTNGTNGTNGTNGTNGTNGTNGTNGTNGTNGTNGTNG 2280  
QY 2362 ATCTTCACTGGGATCAGAGATCGGAAGAGAAAAATAAAGCAAGAGTGGAGAAATCTCT 2421  
Db 2281 ATHTTACNCGNATHMGNGAYMGNAARAARAARAARAARGCNGMWSNNGNGARAAAYCCN 2340  
QY 2422 TATGCTCTCATCGATATTAGCAAGGAGAAATAATCCAGGATTTCCAAACACTGATGAT 2481  
Db 2341 TAYGNGWSNATHGAYATHWSNAARGNGARAAAYAYCCNGGNTTYCARAAAYACNGAYGAY 2400  
QY 2482 GTTCAGACCTCCTTT 2496  
Db 2401 GTNACARACNWSNTTY 2415  
RESULT 13  
AAC84369  
ID AAC84369 standard; DNA; 2415 BP.  
XX AAC84369;  
AC AAC84369;  
XX AC  
DT 19-MAR-2001 (first entry)  
XX Mouse Zace2-5 protein encoding degenerate sequence.  
DE Zace2; metalloenzyg; angiotensin-converting enzyme; ACE; fertility;  
KW zinc metalloproteinase; blood pressure; zinc protease; hypertension;  
KW ventricular systolic dysfunction; renal impairment; heart failure;  
KW scleroderma renal crisis; atherosclerosis; anti-inflammatory; mouse;  
KW antiarthritic; bradykinin inactivator; ds.  
XX Mus sp.  
OS WO200070032-A1.  
XX 23-NOV-2000.  
XX 03-MAY-2000; 2000WO-US11932.  
XX 13-MAY-1999; 99US-0311482.  
PR 27-AUG-1999; 99US-0384706.  
XX (ZYMO ) ZYMOGENETICS INC.  
XX Piddington CS, Petrie CR, Shoemaker KE, Bishop PD;  
PI WPI; 2001-025018/03.  
DR P-PSDB; AAB48097.  
XX Angiotensin-converting enzyme, Zace2, useful for treating inflammatory  
PT bowel disease, e.g. Crohn's disease and ulcerative colitis, or diseases  
associated with inflammation such as arthritis and enterocolitis -  
XX Disclosure: Page 112-113; 125pp; English.  
XX The invention relates to the metalloenzyme Zace2. Zace2, an angiotensin-  
converting enzyme is a zinc metalloproteinase that plays roles in blood  
pressure regulation and fertility. Zace2 can be expressed by standard  
recombinant methodology. Zace2 polypeptides are useful for treating an  
inflammatory bowel disease (e.g. Crohn's disease and ulcerative colitis),  
diseases associated with inflammation like arthritis and enterocolitis, CC

as targets for identifying modulators of zinc protease activity, for screening or identifying new angiotensin-converting enzyme (ACE) inhibitors, and as a basis for rational drug design for inhibitory molecules. The nucleic acids can be used to detect the expression of a Zace2 gene in a biological sample, as probes for in vivo diagnosis and for detecting and localizing Zace2 gene expression in tissue samples, to determine whether a subject's chromosomes contain a mutation in the Zace2 gene, and to detect aberrations associated with the Zace2 locus. Inhibitors of ACE are used for treating hypertension of various conditions, including left ventricular systolic dysfunction, progressive renal impairment, scleroderma renal crisis, congestive heart failure due to dysfunction, and treatment of atherosclerosis. Zace2 agonists may be used to treat infertility while Zace2 antagonists are used for inducing infertility. The present sequence represents a degenerate sequence encoding the mouse Zace2-5 protein.

Sequence 2415 BP; 488 A; 228 C; 397 G; 324 T; 978 other;

Query Match 45.2%; Score 1535.2; DB 22; Length 2415;  
Best Local Similarity 54.6%; Pred. No. 0;  
Matches 1318; Conservative 548; Mismatches 549; Indels 0; Gaps 0;

Qy 82 ATGTCAGCTCTCTCCGGCTCTCTCAGCCTTGTCGTAACTGCTGCTCAGTCCAC 141  
Db 1 ATGWSNWSNWSNTGGYNTYNTWSYNTNGTNGCNGTACNACNGCNCARWSNTN 60  
Qy 142 ATTGAGGACAGCCGACAGCATTGTTGGACAAAGTTTAAACCAAGAGCCGAGACCTGTC 201  
Db 61 ACNGARGAAYCAARACNTTYTNAAYAAATTAAYCAARGCNCARGAYTTNWSN 120  
Qy 202 TATCAAGTTTCACTGCTCTGGAATTAACACCAATATTAACGAGAGTATCCAA 261  
Db 121 TAYCARWSNWSNTGNCNSNTGGAATTAAYCAACAAATTAACGAGAGTATCCAA 180  
Qy 262 AACATGAATTAATGCGGACAAATGCTGCTCTGCTTTTAAAGGACACCTGCTGCT 321  
Db 181 AARATGWSNARGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNGCNG 240  
Qy 322 CAATGATGATCCATACAGAAATTCAGATCTCAGAGTCAAGCTCAGCTGAGCTCTT 381  
Db 241 CARWSNTYNTNCAARGATATCAACACCCNATATTAACGAGAGTATCCAA 300  
Qy 382 CAGCAAAATGGTCTCAGTCTGTCAGAGCAAGCAAGCAAGCAAGCAAGCAAGCAAG 441  
Db 301 CARCARWSNWSNWSNWSNWSNWSNWSNWSNWSNWSNWSNWSNWSNWSNWSN 360  
Qy 442 AATCAATGAGCACCATCTACAGTCTGAGAAAGTTTGAACCCAGATTAATCCACAA 501  
Db 361 AAYACNATGWSNACNATNTAYSNACNGGNAARGTNGTGAAYCCNAAARAYCCNCA 420  
Qy 502 TGCTTATTAATGACAGCAGCTTTGAATGAATTAATGCAACAGTTTACAGCTACAA 561  
Db 421 TGYNTYNTNGARCCNGGNTNGAYGARATATGACNACNWSNACNGAYTAYARWSN 480  
Qy 562 AGGCTCTGGCTGGGAAAGCTGAGTCTGAGTGGCGGCAAGCAGCTGAGGCCATATAT 621  
Db 481 MGNITGGCCTGGGAGGCTGGGAGGCTGGGAGGCTGGGAGGCTGGGAGGCTGGGAG 540  
Qy 622 GAAGAGTATGCTGTGAAATAGAGTGGCAAGAGCAAAATCAATATGAGGAGCTATGG 681  
Db 541 GARGATYCTNGTNTNAAAYGARATGGCNGWNGCNAAYAYAYAYAYAYAYAYGN 600  
Qy 682 GATTATGGAGAGGAGCTATGAAGTAAATGGGGTGAAGTGGTATGAGTACAGCGCGGC 741  
Db 601 GAYTATGGGNGGNGAYTAYARGCNGGNGCNGGNGAYGGNTAYAAAYTAYAYMGNAY 660  
Qy 742 CAGTGTGAAGATGGGAACATCTCTGGAAGAGATTAAACCAATATATGAACATCTT 801  
Db 661 CARYTNATHGARGAYTGNGARWGNACNTYTGCGNARATHAARCCNTYNTAYGARYTN 720  
Qy 802 CATGCCATGTGAGGGCAAGATTGATGAATGCGCTATCCCTTCTATATCATGCTCAAT 861  
Db 721 CAYGCTAYGTNMGNGMNAARYNTATGGAYACNTAYCCNWSNNTAYATHWSNCCNCGN 780

Qy 862 TGCTCCCTGCTCATTTGCTTGGTGATATGTGGGTAGATTTTGGACAAATCTGACTCT 921  
Db 781 TGYTTNCCNGCNCAYTNTYNTNGAYATGTGGGNGMNTTGTGGACNAAYTNTAYC 840  
Qy 922 TGCACAGTTCCCTTTTCAGCAGAAACCAACATAGATGTTACTGATGCAATGTGTGAC 981  
Db 841 YTNACNGTNCNTTYGNCNARARCCNAAATYHAYGTNACNGAYGCNATGATGAACAR 900  
Qy 982 GCTGGGATGACAGAGAAATATTAAGAGGCGGAGAGTCTTTGTATCTGTGGTCTT 1041  
Db 901 GGNITGGGAGCNGARMGNATHHTTYCARGARGCNGARAAATTTTGTNWSNNGTNGNTN 960  
Qy 1042 CCTAATATGACTCAAGSATTTCTGGGAAATTCATGCTTAACGGACCCAGAGAAATGTT 1101  
Db 961 CCNATATGNCNARGNTTYTGGCNAAYWSNATGYTNACNGARCCNGCNGAYGNGN 1020  
Qy 1102 AAAGAGTCTGCCATCCACAGCTTGGGACCTGGGAGGCGGAGCTTCAGGATCTTATG 1161  
Db 1021 AARGTNGTNGCAYCCNACNGCNTGGGAYTNGGNCAYTGGNGAYTTTGMNATHAARG 1080  
Qy 1162 TGCACAAAGGTGACAAATGACGACTTCTCGACAGCTCATCATGAGATGGGCGATATCC 1221  
Db 1081 TGYACNARGTNACNATGAGYAAATYTYTNACNGCNCAYCAGATGGCNCAYATHCAR 1140  
Qy 1222 TATGATATGACATATGCTGCACAACTTTCTGCTAAAGAAATGGAGCTAATGAAGATTC 1281  
Db 1141 TAYGATATGCTNTAYCNCNARGCCTTTCTGCGAGCCACACCTTAAGCATTTAAATCC 1200  
Qy 1282 CATGAAGCTGTTGGGAAATCATGCTCCTGCGAGCCACACCTTAAGCATTTAAATCC 1341  
Db 1201 CATGARGCNGTNGNARATATGWSNNTYTNWSNCGNACNCCNARCAATYTNARSN 1260  
Qy 1342 ATTGGTCTTCTGACCCGATTTTCAAGAGACAAATGAACAGAAATAAATCTCGTCTC 1401  
Db 1261 ATHGNTYNTNCCNWSNAYTTCARGARGAYWSNARACNGARATHAAATYTYNTTN 1320  
Qy 1402 AACAAGCCTACAGATGCTGGGACTGTCCTTACTTACTTACTTACTTACTTACTTACT 1461  
Db 1321 AARCARCNGTNCNAYHGTNGNACNNTNCCNTTACTTACTTACTTACTTACTTACTTACT 1380  
Qy 1462 TGGATGCTTTTAAAGGGAAATTCCTCAAGACCACTGAGTGGATGAAAGTGGTGGAGATG 1521  
Db 1381 TGGATGCTNTTYMNGNGARATHCCNAAARGARCATGATGAARAAATGGTGGGARATG 1440  
Qy 1522 AAGGAGAGATGCTGGGTGGTGGAACTGTCCTGAGCAGTGAACACATCTGTCACCCC 1581  
Db 1441 AARMNGARATGHTNGGNTGNGARCCNYTNCNCAATGATGARACNTATYTGAYC 1500  
Qy 1582 GCATCTCTGCTCCATGTTCTAATGATTAATCTACTCATCTCATCTCATCTCATCTCAT 1641  
Db 1501 GCNWSNTNTYCACTNWSNAYGATYATWSNTTYATHMGNTATYATACNMGNACNATH 1560  
Qy 1642 TACCAATCCAGTTTCAAGAGCCTTTGTCAGGAGCTTAAACATCAAGGCTCTGAC 1701  
Db 1561 TAYCARTTYCARTTYCARGCNGYNTGTCARGCNGCNAATATYAAAGNWSNTNCA 1620  
Qy 1702 AAATGTGACATCTCAAACTCTACAGAGCTGGACAGAAACTGTTCAATATGCTAGGCTT 1761  
Db 1621 AARTGYAYATHWSNAAAYWSNACNGCNGCNGARAAATYNTYNTAARATGTYNTNSNTN 1680  
Qy 1762 GGAATATCAAGCCCTGGACCTTAGCATTTGGAATAATGTTGAGGAGCAAGAACATGAAT 1821  
Db 1681 GGNAYWSNARGCNGTGGACNARGCNYTNGAATYATGTTNGGNGCNGMNAATGAY 1740  
Qy 1822 GTAGGCGCTGCTCAACTACTTTGAGCCCTTATTTACTGCTGCTGCTGCTGCTGCTGCT 1881  
Db 1741 GTNAAARCCNTNTNAAATYATYTCARCCNYTNTYTGATGTYTNAARGARCAAYMGN 1800  
Qy 1882 AATCTTTTGTGGATGGAGTACCGACTGGAGTCCATATGACAGCAGCAAGCAAGTGA 1941  
Db 1801 AAYWSNTTYGTNGTGGAAIACNGARTGWSNCCNTATGCGNATYATGCGNATYATGCGN 1860

QY	1942	AGGATAAGCTAAATCAGCTCTTGGAGATAAAGCATATGAATGAACGACAATGAATG	2001
Db	1861	MGNATHWSNTYNAARWSNCGNTYNGGNCNAAYGCNTAYGARTGGACNAAAYAGARATG	1920
QY	2002	TACCTGTCGGATCGATGTCATATGCTATGAGGAGCTACTTTTAAAGTAAAAAT	2061
Db	1921	TTTTTTTTGWSNWSNCGNTYNGGNCNAAYGCNTAYGARTGGACNAAAYAGARATG	1980
QY	2062	CAGATGATCTTTTGGGAGGAGGATGCGAGTGGCTTAATTTGAAACCAAGAATCTCC	2121
Db	1981	CARACNGTNCNTTYTNGARGARGAYCTNMGNGTNGSNAYYTNAAARCCNMGNTWSN	2040
QY	2122	TTTAAATCTTTTCTCACTGCACCTAAATGCTGCTGATATCATCTAGAACTGAAGTT	2181
Db	2041	TTTTATTTTTTGTNACNWSNCCNARAAAYGTNWSNGAYGTNATCCNMGNSNGARGTN	2100
QY	2182	GAAGGCCATCAGGATGTCGGAGCGGTATCAATGATGCTTCCGTCGTAATGACAAC	2241
Db	2101	GARGAYCCNATHMGNATGWSNMGNGNMGNATHAAYGAYGTNTTYGGNYTNAAYGAYAY	2160
QY	2242	AGCTAGAGTTCTCGGGGATACAGCCACACTTGGACCTCTTAACGAGCCCTGTTTCC	2301
Db	2161	WSNYTNGARTTYTNGNATHAYCCNACNTYNGARCCNCCNTAYCARCCNCCNGTNACN	2220
QY	2302	ATATGCTGATGCTTTTGGAGTGTGATGGAGTATAGTGGTGTGCTATGTCATCTCG	2361
Db	2221	ATHTGGYTNATHATHTTYGGNCTNCTNATGCVNTNGTNGTNGNATHATHATHYTN	2280
QY	2362	ATCTTCACTGGGATCAGATCGGAAGAAGAAAATAAGCAAGAGTGGAGAAATCCT	2421
Db	2281	ATHGTNACNGNATHAARGNMGNAARAAARAAAYGARACNAAARMGNGARGAAYCCN	2340
QY	2422	TATGCTCCATCGATATTAGCAAGGAGAAAATAATCCAGGATTCCAAACACTGATGAT	2481
Db	2341	TAYGAYWSNATGAYATHGNGNARGNGARNSNAYCGNCGNTTYCARAAYSNGAYAY	2400
QY	2482	GTCAGACCTCCTTT 2496	
Db	2401	GCNACACNWSNTTY 2415	

RESULT 14

AAU06017/C

ID AAL06017 standard; DNA; 946 BP.

XX AC AAL06017;

XX DT 21-NOV-2001 (first entry)

XX DE Human reproductive system related antigen DNA SEQ ID NO: 8705.

KW Human; reproductive system related antigen; reproductive system disorder;

KW cancer; gene therapy; ds.

XX OS Homo sapiens.

XX PN WQ200155320-A2.

XX PD Q2-AUG-2001.

XX XX 17-JAN-2001; 2001WO-US01339.

XX XX 31-JAN-2000; 2000US-0179065.

PR 04-FEB-2000; 2000US-0180628.

PR 24-FEB-2000; 2000US-0184664.

PR 02-MAR-2000; 2000US-0186350.

PR 16-MAR-2000; 2000US-0189874.

PR 17-MAR-2000; 2000US-0190076.

PR 18-APR-2000; 2000US-0198123.

PR 19-MAY-2000; 2000US-0205515.

PR 07-JUN-2000; 2000US-0209467.

PR 28-JUN-2000; 2000US-0214886.

PR 30-JUN-2000; 2000US-0215135.

20-OCT-2000; 2000US-0241808.  
 20-OCT-2000; 2000US-0241809.  
 20-OCT-2000; 2000US-0241826.  
 01-NOV-2000; 2000US-0244617.  
 08-NOV-2000; 2000US-0246474.  
 08-NOV-2000; 2000US-0246475.  
 08-NOV-2000; 2000US-0246476.  
 08-NOV-2000; 2000US-0246477.  
 08-NOV-2000; 2000US-0246478.  
 08-NOV-2000; 2000US-0246523.  
 08-NOV-2000; 2000US-0246524.  
 08-NOV-2000; 2000US-0246525.  
 08-NOV-2000; 2000US-0246526.  
 08-NOV-2000; 2000US-0246527.  
 08-NOV-2000; 2000US-0246528.  
 08-NOV-2000; 2000US-0246532.  
 08-NOV-2000; 2000US-0246609.  
 08-NOV-2000; 2000US-0246610.  
 08-NOV-2000; 2000US-0246611.  
 08-NOV-2000; 2000US-0246613.  
 17-NOV-2000; 2000US-0249207.  
 17-NOV-2000; 2000US-0249208.  
 17-NOV-2000; 2000US-0249209.  
 17-NOV-2000; 2000US-0249210.  
 17-NOV-2000; 2000US-0249211.  
 17-NOV-2000; 2000US-0249212.  
 17-NOV-2000; 2000US-0249213.  
 17-NOV-2000; 2000US-0249214.  
 17-NOV-2000; 2000US-0249215.  
 17-NOV-2000; 2000US-0249216.  
 17-NOV-2000; 2000US-0249217.  
 17-NOV-2000; 2000US-0249218.  
 17-NOV-2000; 2000US-0249244.  
 17-NOV-2000; 2000US-0249245.  
 17-NOV-2000; 2000US-0249264.  
 17-NOV-2000; 2000US-0249265.  
 17-NOV-2000; 2000US-0249297.  
 17-NOV-2000; 2000US-0249299.  
 17-NOV-2000; 2000US-0249300.  
 01-DEC-2000; 2000US-0250160.  
 01-DEC-2000; 2000US-0250391.  
 05-DEC-2000; 2000US-0251030.  
 05-DEC-2000; 2000US-0251988.  
 05-DEC-2000; 2000US-0256719.  
 06-DEC-2000; 2000US-0251479.  
 08-DEC-2000; 2000US-0251856.  
 08-DEC-2000; 2000US-0251868.  
 08-DEC-2000; 2000US-0251869.  
 08-DEC-2000; 2000US-0251989.  
 08-DEC-2000; 2000US-0251990.  
 11-DEC-2000; 2000US-0254097.  
 05-JAN-2001; 2001US-0259678.  
 (HUMA-) HUMAN GENOME SCI INC.  
 Rosen CA, Barash SC, Ruben SM;  
 WPI; 2001-465570/50.  
 Isolated nucleic acid molecule encoding a reproductive system antigen -  
 is used in preventing, treating or ameliorating a medical condition -  
 Disclosure; SEQ ID NO 8705; 1297pp + Sequence Listing; English.  
 The present invention provides the protein and coding sequences of a  
 number of human reproductive system related antigens. These can be used  
 in the prevention and treatment of reproductive system disorders,  
 including cancer. The present sequence is a genomic sequence encoding a  
 protein of the invention.

Sequence 946 BP; 299 A; 197 C; 165 G; 285 T; 0 other;

Query Match 27.9%; Score 946; DB 22; Length 946;

Best Local Similarity 100.0%; Pred. No. 8e-246;  
 Matches 946; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 QY 2426 CCTCCATCGATATTAGCAAGAGAGAAATAATCCAGGATTCACAAACACTGATGATGTTTC 2485  
 DB 946 CCTCCATCGATATTAGCAAGAGAGAAATAATCCAGGATTCACAAACACTGATGATGTTTC 887  
 QY 2486 AGACCTCCTTTTGTAGAAAATCTATGTTTTTCCCTCTGAGGTGATTTGTTGTATGTAAT 2545  
 DB 886 AGACCTCCTTTTGTAGAAAATCTATGTTTTTCCCTCTGAGGTGATTTGTTGTATGTAAT 827  
 QY 2546 GTTAATTTTCATGTTAGAAAATCTATGTTTTTCCCTCTGAGGTGATTTGTTGTATGTAAT 2605  
 DB 826 GTTAATTTTCATGTTAGAAAATCTATGTTTTTCCCTCTGAGGTGATTTGTTGTATGTAAT 767  
 QY 2606 GACTCTGTTCCAGAAAATAATGTCACAAACAGATGCCAAGGAGAGAGATCTTCAT 2665  
 DB 766 GACTCTGTTCCAGAAAATAATGTCACAAACAGATGCCAAGGAGAGAGATCTTCAT 707  
 QY 2666 TGACATTTGCTTTCAGTATTTTATTTCTCTCTGGATTTGACTTCTGTTCTGTTCTTTAAT 2725  
 DB 706 TGACATTTGCTTTCAGTATTTTATTTCTCTCTGGATTTGACTTCTGTTCTGTTCTTTAAT 647  
 QY 2726 AAGATTTTGTATTAGAGTATATTAGGAAAGTGTATTTTGGTCTCACAGGCTGTTTCAAG 2785  
 DB 646 AAGATTTTGTATTAGAGTATATTAGGAAAGTGTATTTTGGTCTCACAGGCTGTTTCAAG 587  
 QY 2786 GGATAATCTAAATGTAATGTCGTGTTGAATTTCTGAAAGTGAACAAAGGATATATATCAT 2845  
 DB 586 GGATAATCTAAATGTAATGTCGTGTTGAATTTCTGAAAGTGAACAAAGGATATATATCAT 527  
 QY 2846 GGAGCAAGTGTGATGATCTGTTGATGGAATATGGATGATCACTTGTAAAGCAGTGCCTGG 2905  
 DB 526 GGAGCAAGTGTGATGATCTGTTGATGGAATATGGATGATCACTTGTAAAGCAGTGCCTGG 467  
 QY 2906 GAACCTGCTAGCTGCAAGGATTTGAAATGGCATGCTACCTAGCTCACTTTCATTTAATCCA 2965  
 DB 466 GAACCTGCTAGCTGCAAGGATTTGAAATGGCATGCTACCTAGCTCACTTTCATTTAATCCA 407  
 QY 2966 TTGTCAAGGATGACATGCTTTCTTCACAGTAACTCAGTTTCAAGTACTATGTTGATTTGCC 3025  
 DB 406 TTGTCAAGGATGACATGCTTTCTTCACAGTAACTCAGTTTCAAGTACTATGTTGATTTGCC 347  
 QY 3026 TACAGTATGTTTGGATCGATCATCTTCTTCAAGGTGACAGCTCTAAAGAGAGAGA 3085  
 DB 346 TACAGTATGTTTGGATCGATCATCTTCTTCAAGGTGACAGCTCTAAAGAGAGAGA 287  
 QY 3086 ATCCAGGAAACAGGTAGAGGACATTCCTTTTCACTTCCAAAGGTCTTGTATCAACATCTC 3145  
 DB 286 ATCCAGGAAACAGGTAGAGGACATTCCTTTTCACTTCCAAAGGTCTTGTATCAACATCTC 227  
 QY 3146 CCTGACACACAAACTAGAGCCAGGGGCTCCGTGAACCTCCAGAGCATGCCGTATAGA 3205  
 DB 226 CCTGACACACAAACTAGAGCCAGGGGCTCCGTGAACCTCCAGAGCATGCCGTATAGA 167  
 QY 3206 AACTCAATTTCTACTGTTCTCTAACTGTGGAGTGAATGGAAATTCACAACTGATGTTCCACC 3265  
 DB 166 AACTCAATTTCTACTGTTCTCTAACTGTGGAGTGAATGGAAATTCACAACTGATGTTCCACC 107  
 QY 3266 CTCTGAAGTGGTACCCAGTCTCTTAAATCTTTTGTATTTGCTACAGTGTGTTGAGCAGT 3325  
 DB 106 CTCTGAAGTGGTACCCAGTCTCTTAAATCTTTTGTATTTGCTACAGTGTGTTGAGCAGT 47  
 QY 3326 GCTGAGCACAAGCAGACACTCAATAAATGCTAGATTTACACATCTC 3371  
 DB 46 GCTGAGCACAAGCAGACACTCAATAAATGCTAGATTTACACATCTC 1

RESULT 15  
 AAL06018/c  
 ID AAL06018 standard; DNA; 946 BP.  
 XX  
 AC AAL06018;

XX	21-NOV-2001 (first entry)	14-SEP-2000; 2000US-0233063.	PR
DT	Human reproductive system related antigen DNA SEQ ID NO: 8706.	14-SEP-2000; 2000US-0233064.	PR
XX		14-SEP-2000; 2000US-0233065.	PR
DE		21-SEP-2000; 2000US-0234223.	PR
XX		21-SEP-2000; 2000US-0234274.	PR
KW	Human; reproductive system related antigen; reproductive system disorder;	25-SEP-2000; 2000US-0234997.	PR
KW	cancer; gene therapy; ds.	25-SEP-2000; 2000US-0234998.	PR
XX		26-SEP-2000; 2000US-0235484.	PR
OS	Homo sapiens.	27-SEP-2000; 2000US-0235834.	PR
XX	WO200155320-A2.	29-SEP-2000; 2000US-0236327.	PR
PN		29-SEP-2000; 2000US-0236367.	PR
XX		29-SEP-2000; 2000US-0236368.	PR
PD		29-SEP-2000; 2000US-0236369.	PR
XX		29-SEP-2000; 2000US-0236370.	PR
PF	17-JAN-2001; 2001WO-US01339.	02-OCT-2000; 2000US-0236802.	PR
XX		02-OCT-2000; 2000US-0237037.	PR
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PR 11-DEC-2000; 2000US-0254097.  
PR 05-JAN-2001; 2001US-0259678.  
XX (HUMA-) HUMAN GENOME SCI INC.  
XX Rosen CA, Barash SC, Ruben SM;  
XX WPI; 2001-465570/50.  
XX  
PT Isolated nucleic acid molecule encoding a reproductive system antigen -  
PT is used in preventing, treating or ameliorating a medical condition  
XX  
PS Disclosure; SEQ ID NO 8706; 1297pp + Sequence Listing; English.  
XX  
CC The present invention provides the protein and coding sequences of a  
CC number of human reproductive system related antigens. These can be used  
CC in the prevention and treatment of reproductive system disorders,  
CC including cancer. The present sequence is a genomic sequence encoding a  
CC protein of the invention.  
XX  
SQ Sequence 946 BP; 299 A; 197 C; 165 G; 285 T; 0 other;  
  
Query Match 27.9%; Score 946; DB 22; Length 946;  
Best Local Similarity 100.0%; Pred. No. 8e-246;  
Matches 946; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
  
QY 2426 CTTCCATCGATATTAGCAAGAGAGAAAATAATCCAGGATTCAMAACTGATGATGTTTC 2485  
DB 946 CTTCCATCGATATTAGCAAGAGAGAAAATAATCCAGGATTCAMAACTGATGATGTTTC 887  
  
QY 2486 AGACCTCCTTTAGAAAATCTATCTTTTCTCTCTGAGGTGATTTCTGTTGATGTAAT 2545  
DB 886 AGACCTCCTTTAGAAAATCTATCTTTTCTCTCTGAGGTGATTTCTGTTGATGTAAT 827  
  
QY 2546 GTTAATTTTCATGGTATAGAAAATATAAGATGATAAAGATATCATTTAAATGCAAACTAT 2605  
DB 826 GTTAATTTTCATGGTATAGAAAATATAAGATGATAAAGATATCATTTAAATGCAAACTAT 767  
  
QY 2606 GACTCTGTTTCAGAAAATAATTTGCCAAGACAACTATGCCAAGAGAGAGCATCTTCAT 2665  
DB 766 GACTCTGTTTCAGAAAATAATTTGCCAAGACAACTATGCCAAGAGAGAGCATCTTCAT 707  
  
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QY 2786 GGATAATCTAAATGTAATGTCGTGTAATTTCTGAAGTTGAAACAGGATATATCAT 2845  
DB 586 GGATAATCTAAATGTAATGTCGTGTAATTTCTGAAGTTGAAACAGGATATATCAT 527  
  
QY 2846 GGAGCAAGTGTGGATCTTTGTATGGAATATGGATGGATCACTTGTAAAGACAGTGCCTGG 2905  
DB 526 GGAGCAAGTGTGGATCTTTGTATGGAATATGGATGGATCACTTGTAAAGACAGTGCCTGG 467  
  
QY 2906 GAACCTGGTGTAGCTGCAAGGATTTAGAAATGGCATGCAATTTAGCTACTTTTCAATTAATCCA 2965  
DB 466 GAACCTGGTGTAGCTGCAAGGATTTAGAAATGGCATGCAATTTAGCTACTTTTCAATTAATCCA 407  
  
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DB 406 TTGTCAGGATGACATGCTTTCTTCCACAGTAACTCACTAGTCACTATGTTGATTTGCC 347  
  
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DB 346 TACAGTGTATGTTTGGAAATCGATCATGCTTTCTTCAAGGTGACAGGTCTAAAGAGAGAAGA 287

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DB 46 GCTGAGCACAAAGCAGACACTCAATAAATGCTAGATTTACACACTC 1

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